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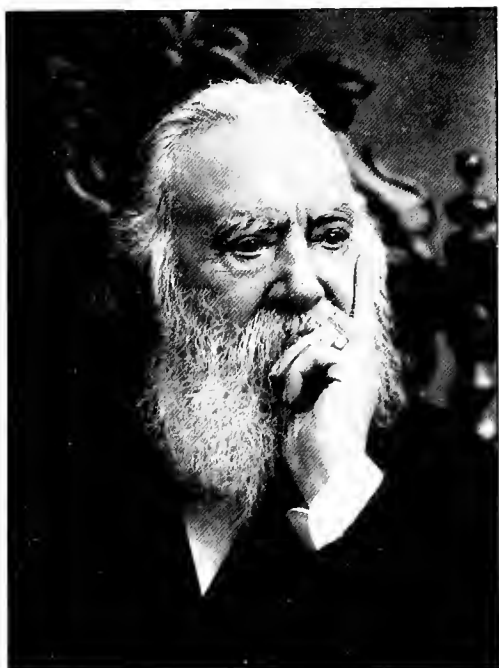


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PRINCIPLES OF SPEECH AND DICTIONARY OF SOUNDS

INCLUDING

DIRECTIONS AND EXERCISES FOR THE
CURE OF STAMMERING

AND

CORRECTION OF ALL FAULTS OF ARTICULATION

BY

ALEXANDER MELVILLE BELL

AUTHOR OF

"Visible Speech and Universal Alphabets,"

"Sounds and Their Relations,"

"Principles of Elocution,"

"Line Writing,"

Etc., Etc.



1900

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PREFACE

TO FIFTH EDITION.

THE first edition of this work was published in 1849, and I am now called on—after the lapse of half a century—to prepare a fifth edition for the press.

The subject of Visible Speech was not introduced in either of the preceding editions, but it is now added, as a completing section, to the book. A study of the principles of Visible Speech cannot fail to be of important assistance to the student in mastering the “Principles of Speech,” for teaching purposes.

The theories and classifications of the earlier editions are here left unchanged, in order that the advance made by Visible Speech may be clearly recognized and estimated.

In the Exemplifications of English Visible Speech, at the end of the volume, the differences of vowel quality between unaccented and accented syllables, which are so characteristic of English pronunciation, are regularly shown. In this way the seat of accent is indicated without the use of accent marks.

I cannot hope to see this edition exhausted, like its predecessors. In one's eighty-first year the retrospect is so long that the prospective outlook must be relatively very short.

I rejoice that this book has been found worthy of so long life. Through it I may hope to continue teaching—as hitherto—successions of students, in Britain, America, and wherever English is vernacular.

ALEX. MELVILLE BELL.

PREFACE

TO SECOND, THIRD, AND FOURTH EDITIONS.

THE Author's *New Elucidation of the Principles of Speech and Elocution* has been long out of print. The elocutionary sections of that work were remodeled into a separate volume, under the title of *The Elocutionary Manual—Principles of Elocution*, the third edition of which, with important additions, was published in 1859. The republication of the *Dictionary of Sounds*, and the other sections of the first work, has been delayed until leisure from engrossing professional practice could enable the Author to rewrite the whole, and embody his further experiences in the work. This has now been accomplished; and the Author trusts that the present volume will be found worthy of the approbation and success which have attended his former treatises.

In the preparation of this work the Author has endeavored to write—not as for the use of pupils, to whom a defective description in the book might be orally supplemented—but for those to whom such additional instruction is not, and can not be, available. He has studied to preserve the utmost simplicity of arrangement, and to avoid overloading principles by unnecessary rules. He has not followed in the steps of any preceding writer, either as to his theory or his plan of developing it; but he has observed nature for himself, and recorded his observations after his own fashion. The science of speech seemed to want an A B C, and he has endeavored to supply the deficiency.

With reference to defects and impediments of articulation, the Author has unreservedly communicated the principles and the exercises, by means of which such faults may be eradicated ; and by the persevering application of which the stammerer, to whom oral instruction is beyond convenience, may work out his own relief.

Early attention to imperfections of utterance would be in almost all cases successful in preventing the formation of impediments, if parents, teachers, governesses, and tutors were competent to direct the articulation of children. The necessary knowledge of Principles, with many assistant exercises, adapted for the youngest pupils, the following pages supply.

Public speakers, whose pronunciation is indistinct, or who suffer from exhaustion after vocal effort, will here learn the means of rendering their delivery mechanically faultless, and the most protracted exercise of the voice perfectly easy and salutary.

Students of language will find the elementary analyses of vowels and articulations, the illustrative tables, observations, etc., and the articulative exercises, of great value in facilitating the acquisition of foreign tongues, and the perfection of vernacular utterance ; while to foreigners the attainment of English characteristics of speech is, by the same means, rendered easy of accomplishment.

The Author is indebted to his father, ALEXANDER BELL, Esq., Professor of Elocution, London, and to his brother, D. C. BELL, Esq., Professor of Elocution, Dublin, for their critical perusal of this work in its progress through the press.

EDINBURGH,

1st January, 1863.

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VOCAL PHYSIOLOGY

THE
PRINCIPLES OF SPEECH, ETC.

Part First.

THE ELEMENTS OF SPEECH.

SPEECH consists of variously modified emissions of breath. The first modifying agent is the glottis, or aperture of the wind-pipe; in passing through which, the breath acquires a rustling, vibratory, or sonorous quality, in proportion to the degree of tension and approximation of the vocal chords—the edges of the glottis.

When the glottis and the mouth are *perfectly open*, the breath may be expelled, even forcibly, without audibility. When the glottal aperture is *somewhat contracted*, the passage of the breath is rendered faintly audible: this is the condition of the glottis in whispering a vowel, or in the softer utterance of the letter H. The glottis may be adjusted *almost to the vocalizing position*, and that husky voice is produced which is the natural expression of fear and of the dark passions; and when the edges of the glottis are braced to the *clearly vocalizing point*, the breath acquires that beautiful sonorous quality which is called VOICE.

The breath, glottally modified in either of these ways, may be farther modified in its passage through the mouth, by the shape and arrangement of the plastic organs of articulation—the soft palate, the tongue, and the lips.

The varying shape of the mouth, with an uninterrupted central channel for the issue of the breath, gives *vowel* quality to the breath, whispered or vocalized; and the close approximation, partial or complete contact of the oral organs, gives *articulative* or “consonant” effect to the same voiceless or sonorous current of breath.

In the common analysis of Speech, its elements have been divided into two classes, called *Vowels* and *Consonants*. The former class is said to contain those elementary sounds which are capable of being uttered alone; and the latter, those which are incapable of being pronounced without the aid of a vowel. This is incorrect; for, not only the vowels, but all the “consonants,” may be perfectly sounded alone. The terms Vowel and Consonant, thus understood, do not draw a clear line of distinction between the two natural classes of elements, intended to be designated; and either some other nomenclature must be adopted, or a definition of these terms received which may effect the object of the classification. The ordinary definition of the term *Vowel* would render that name equally applicable to all the elements of speech; and the term *Consonant*, as generally defined, is inapplicable to any one of them.

To remedy the inconvenience of inaccurate definitions, numerous subdivisions of the elements have been made, and categorical terms have been multiplied. As might be expected from such a fundamental error, writers are often not agreed as to the class to which certain

letters should belong. Y and W have been by some authors declared to be consonants; by others, vowels; by others, semi-consonants; by others, both vowels and consonants. It will be of importance if we can establish a classification which may be generally admitted.

Dr. Rush, in his "Philosophy of the Human Voice," has proposed a mode of classification into "tonics" (vowels), "subtonics," (articulations with voice), and "atonic" (voiceless articulations). But this does not show the primary and most important division of the elements, intended to be expressed by the terms, Vowel and Consonant. It does not recognize the difference between a *position* and an *action*, which this acute author seems strangely to have overlooked.

"Consonants" have been subdivided into *mutes*, *semi-mutes*, *semi-vowels*, *demi-semi-vowels*, *liquids*, *sharp letters*, *flat letters*, *soft*, *hard*, etc.; but to most of the terms there has been no clear meaning attached, and in their application there has been no little inconsistency. The names *flat* and *sharp*, *hard* and *soft*, etc., have been applied by different persons to opposite classes of letters; and,—so little have these words been made to convey any definite idea,—we have heard the two former terms explained by a public lecturer to be "just like sharps and flats in music," to which, except in an absurd nomenclature, they have not a shadow of relation.

The most obvious difference among the elements of speech obtains between those sounds which pass freely through the *open* mouth, and those which are forced through *interstices*, or stopped by organic *conjunction*. The former may as well be called *vowels* as by any other name; only let the term be correctly defined, and the mere name is of little consequence. Those utterances,

then, which pass freely from the glottis through a certain open conformation of the vocal canal, and unaffected by any sound of breath, hissing, or compressed within the mouth,—let us call VOWELS. All other elements of speech will be found to coincide in this, that their audible effect is either wholly or partly produced within the mouth; and that an appulsive action of some part of the lips or tongue is necessary to their formation. Let us call these by a term already in use,—ARTICULATIONS.* A vowel, according to this definition, is the result of an open position of the oral organs; an articulation is the result of an opening action of the organs.

The Articulations are, on obvious principles, divisible into subordinate classes. Some of them owe their audibility solely to the mouth, to the action of the breath against the organs of articulation. As these are accompanied by no glottal vibration, they may be appropriately called Voiceless or *Breath* articulations. All others will fall under the category of *Voice* articulations.

The nature of the articulative *actions* gives reason for subdivisions of each of these classes. Those actions which altogether stop the flow of breath or voice may be called *obstructive*, or *shut*; and those which do not, may be appropriately called *continuous*; the latter being further divided into *close* and *open*.

Thus, the letters P, T, K are shut breath articulations; and B, D, G, are shut voice articulations; F, Wh, Th, S, Sh are continuous breath articulations, and V, W, Th, Z, Zh, R, Y, L, M, N, NG are continuous voice articulations. Of these last, the first seven letters are *close*,

* The word "articulation" has been sometimes applied to vowels, as well as consonants, but its limitation to the latter class of elements is not only convenient, but correct. The vowels are the material of speech, and the articulations are the joints or hinges by whose motion the vowels are separated from each other, and are affected in their duration.

and the remainder *open*. The reason for making a distinction among the continuous voice articulations is that L, M, N, NG are almost as purely vocal as any vowel—the stream of voice having a free channel, and suffering but little compression in its passage. Indeed, but for the distinct organic *action* necessary to each of these letters, they might be ranked among the vowels.

Our alphabet gives us 26 letters;—5 vowel, and 21 articulation marks. Our language contains 13 radically distinct vowel formations, and 24 varieties of articulation, besides the variable aspiration H. A perfect alphabet of English sounds would therefore contain not fewer than 38 distinguishable simple characters. But, on a principle which will be found explained in a subsequent chapter, this number might be obtained from little more than 12 distinct characters,—the remainder being produced from these by uniform changes, to represent their uniformity of difference.

Not only is the alphabet deficient in the number of its characters; it is also redundant, and is burdened with letters which do not represent simple elements, but combinations. The inadequacy of the vowel marks to represent the vowel sounds is most manifest. We have no regular and consistent way of writing any one vowel. Single letters represent diphthongs, and the utmost confusion of diphthongal characters prevails in our modes of writing simple vowel sounds. The alphabet furnishes no characters by which to represent six of our articulations—namely, Sh, Th(in), Th(is), Zh, (as in azure), Wh, NG; and we are thus forced to the anomaly of using digraphs to represent simple sounds, while there are simple characters in the alphabet which represent double sounds; we have three letters for one articulation,

namely, C, K, Q (besides which we compound a digraph, Ch: the letter C stands for both K and S; and the letters J and X represent combinations of two actions; the former letter being equivalent to *dzh*, and the latter,—doing quadruple duty,—representing *k s*, and also (their voice forms) *g z*.

The great inconvenience of this faulty alphabet has been long felt; and however easy it might be to propose a remedy, it would not be so easy to get the the most advantageous plan adopted. We must content ourselves, in the meantime, with clearing away the difficulties that have arisen from the want of a correct and generally recognized principiation of our speech, and leave the reformation of our orthography to be worked by a more thorough acquaintance with its defects. We shall have aided the work if we succeed in classifying the elementary sounds according to their natural order, and in describing popularly and practically the exact formation of the elements of speech.

BREATH—RESPIRATION.

THE importance of knowing how to regulate the breathing with ease and efficiency, in public speaking, cannot be over-estimated. Many a zealous speaker has cut short his career of usefulness by injurious action of the chest in respiration; and complaints are frequent—especially among clergymen—of uneasiness in speaking, exhaustion after vocal effort, pain in the chest, expectoration of blood, and other symptoms of serious pulmonary affections, which manifest the prevalence of fatal ignorance on this most important subject.

Here is one momentous evil arising from the neglect of vocal training, as a part of the necessary education of clergymen. Proceeding to the performance of arduous public duties with the mere *instinct* of speech, many sink under the injuries inflicted by zealous but misdirected effort. For want of a principle of managing the respiration, which should have been acquired before the delivery of their first sermon, they accompany every accent by a motion of the trunk or the limbs; and, with chests almost collapsed, work themselves into vehemence by dint of sheer bodily labor. To avoid feebleness and monotony, they must be constantly in action—tossing and swaying the body—rising and falling on the heels—nodding the head—swinging and jerking the arms—kneading the cushion—or hammering on the pulpit frame. Some, with little taste or tact, fall into a regular rotation of actions, which they perform as uniformly as automata; and others, gratifying their sense of the necessity for variety, yield to every impulse, and indulge in the most out-of-place extravagance; under which they steam, and drip, and froth; while the strained, ranting sound which is squeezed or spouted forth exhausts the powers of nature, and the overwrought speaker, panting and breathless, sinks into a state of complete prostration.

The amount of air ordinarily inspired for *vital* wants is quite insufficient for *vocal* purposes. The lungs must, before speech is commenced, and during speech, be made to contain a far greater than the ordinary supply. For breath, let it be remembered, is the *material* of speech.

To make the speaker's respiration healthful, the act of inspiration must be full and deep. No effort of *suction* is required to effect this; the chest has but to be expanded, and the air will rush into the lungs, and distend

them to the full extent of the cavity created within the thorax. The chest *must then be held up*, to prevent wasteful emission before speech is commenced; and, during the longest flow of speech, the chest should fall but little. The upward pressure of the diaphragm on the lungs will expel the breath without the laborious action of the bony structure of the chest.

No straining or muscular effort is needed to elevate, or to keep raised, the framework of the chest; the wave of breath inspired should, as it were, *buoy it up*, and frequent replenishings should keep it thus afloat on the body of air in the lungs.

The breathing should always be conducted *inaudibly*; an inspiration, to be full, *must be silent*. Noisy inspirations are necessarily incomplete; their sound arises from constriction of the glottal aperture, and this, of course, lessens the volume of air that can enter. But even were such breathing as effectual as the noiseless flowing in of *a wave of air*, the hideous effect of it would be enough to keep every speaker of taste from so outraging the feelings of his auditors. This sort of strangulatory inspiration is most common on the stage, among the melo-dramatic heroes, whose element and forte are “colored fire” and “desperate combats.”

The common Scotch bagpipe gives an excellent illustration of the comparative efficacy of a partial and of a complete inflation of the lungs. See the piper, when the bag is only half filled, tuning the long drones; how his arm jerks on the wind-bag!—and hear the harsh, uneven notes that come jolting out from the pressure. Then see him, when the sheep-skin is firmly swelled beneath his arm—how gently his elbow works upon it! while the clear notes ring out with ear-splitting emphasis. Let the

public speaker learn from this an important lesson. He, too, plays upon an instrument—one not unlike the bag-pipe in construction. Let him learn to use it rationally; in consciousness, at least, of the mechanical principles of the apparatus. For, as the instrument of speech is more perfect than anything the hand of man has fashioned, it surely must, when properly handled, be “easier to be played on than a pipe!”

A very useful exercise for strengthening the respiration consists in *reading* in a *strong, loud WHISPER*. This will be found laborious at first, but practice will make it more easy. It should not, however, be long continued, on account of the giddiness which it is apt to produce.

A full *inspiration* elevates and expands the chest, and, by descent of the diaphragm, slightly protrudes the abdomen; and a correct *vocal expiration* manifests itself, first, in the flattening of the abdomen, and then in its very gradually falling inward, in prolonged expiration:—the *chest* making little or no *action* downwards, even in the most forcible effort.

In cases of pulmonary and vocal weakness, the very opposite of this mode of respiration is generally found to be habitual. The chest falls with every expiration, and has to be again raised when breath is inhaled. The diaphragm is almost a fixture, and the speaker becomes exhausted by the continual muscular effort needed to work the massive framework of the chest. The chest should be fully expanded, once for all, before the first word is uttered, and then kept up by frequent imperceptible replenishments of air, to the close of the longest sentence or paragraph. In this way, speaking becomes, instead of an exhausting labor, one of the most salutary exercises.

Comparatively few persons ever have the chest fully

inflated—except, perhaps, before a yawn or a sigh ;—and many undoubtedly sink into consumption from the continual state of collapse in which the lungs are kept. Mechanical exercises in breathing to develop the chest would be of more avail in the cure of consumption than change of climate or all the drugs in the pharmacopeia.

Stammerers almost always have the clavicular and unhealthy respiration above described. The action of the chest is sometimes painfully laborious ; and the natural emission of the breath in speech is checked by spasmodic closures of the mouth and glottis ; or reversed by attempts to speak with ingoing air. The regulation of the breathing is the most important, and, generally, the most difficult part of the process of cure.

VOICE.

THE organ of Voice is placed beyond the reach of observation in the living subject, and, consequently, has seldom been seen in operation. Circumstances have, however, enabled some qualified observers to see enough of its modes of action to ascertain analogies between it and certain musical instruments. The vocal organ combines the qualities of a wind and of a stringed instrument, sound being produced by means of a current of air—as in the flute ; and alterations of pitch being effected by elongation and contraction, with comparative slackness or tension of the vocal chords—as in the violin. All other instruments of sound, however perfect in their kind, fall infinitely short of the compact perfection of this wonderful apparatus ; which, within such a tiny space as mocks the art of man, unites the

various registers, and the swell and thunder of the organ, with the flexibility and minute play of tone of the violin or Eolian harp.

Some important vocal principles may be illustrated by means of a simple little instrument, whose sonorous vibrations are, in many respects, analogous to those of the human glottis. This is the *reed* of the *bagpipe drone*. An experimental sonifier of this kind may be constructed from a common quill, in the following manner :

Remove from a new quill the feathered end and the dry and tough matter within and at the other end of the quill, so as to leave only the brittle portion. Seal up one end of this tube with wax, and cut a tongue in the side of it, beginning the slit near to the wax, thus :



[Insert the sealed end within the mouth.]

With this instrument, the following principles may be exemplified :

If the slit, and, consequently, the vibrating tongue, be *short*, the sound will be shrill and strained ; and, if the tongue be gradually lengthened, the pitch of its note will become deeper and more mellow with every increase.* In an analogous manner the glottal aperture is contracted in length when producing high tones, and elongated in producing grave sounds.

If the tongue of the reed or quill project so as to leave too open an aperture, the air will pass below the tongue without setting it in vibration ; and, consequently, no sound will be heard except that of the rushing of the

* The vibrating length of the tongue may be altered by means of a piece of thread,—as shown in the cut.

air, more or less audibly, according to the degree of openness of the aperture, and the force of the breath. This state of the reed is analogous to that of the glottis in *whispering*. Every gradation of sound, from the softest breathing to the strongest sonorousness, may be produced either with the reed or by the glottis.

If the tongue of the reed lie *quite close*, so as completely to cover the aperture, no sound or breath will issue; and if, while the effort of expiration is continued, the tongue should suddenly take the vibrating position, the sound will burst out with abrupt energy, proportioned to the force of the preceding silent effort. This condition and action of the reed are analogous to those of the glottis in many cases of *stammering*.

To keep the reed in a position for vibrating, an aperture must be maintained; and, to produce voice, the edges of the glottis must be in close approximation, without being absolutely in contact. Too much openness of the aperture renders the tone husky; and too little openness gives a strained and inflexible character to the voice. It is important to all persons who labor under difficulties in the management of the voice, to be perfectly familiar with the process by which vocality is produced; to make themselves so by experiment; and to aim at the improvement of their vocal powers, by applying the same principles which they find to govern the mechanism of analogous sounds.

It will be observed, on experimenting with the reed or quill, that the sound does not begin by a *gradual process* from the rustling effect of breath to pure sonorousness, but with a quick explosiveness; as if the vibrating tongue shut up the aperture for a moment on first feeling the pressure of the air; or, rather, as if its first vibration

occluded the aperture for an instant. So, in the production of pure glottal sound, there is a sharp and instantaneous opening of the voice, as if from a momentary holding in of the breath before the vocal emission. This effect is a great beauty in vocalizing; a source of ease, power, and distinctness as well as of grace. When the voice is otherwise commenced, much breath is wasted before vocality is obtained, and a clear resonant voice can hardly be produced by the loose expiration.

M. Garcia, of Paris, and other scientific singing-masters, prescribe exercises on this *coup de la glotte* as the best means of purifying and strengthening the vocal tones. And to speakers the principle is not less important than to singers.

The following modes of practice will enable any person readily to master this glottal action.

Inhale a full breath, and *retain it for a second*; then, with force and abruptness, eject a vowel sound, with open mouth, directly from the throat; avoiding, in the most forcible effort, any bending, or other action of the head or body.

EXERCISE—COUP DE LA GLOTTE.

A, E, I, O, U, Ah, Aw, Oi.

When this has been sufficiently practiced on individual sounds, enounce, *in the same way*, but with abated force, as many repetitions of each vowel as can be effected with one expiration; taking care that after each sound, *the chest is held up*, or the next vowel will probably lose the crisp initial quality. The speaker should apply this principle of vocal formation to all INITIAL VOWELS.

Imperfectly sonorous voice requires a much greater expenditure of breath than clear tone. If the preceding

theory have not made the reason of this obvious, the *prolongation* of vowels will prove the truth of the observation. The *less clear* the sound, the *greater is the waste* of breath; the more sonorous the voice, the more easy is its production, and the less exhausting its continuous exercise.

The following exercise will strengthen the lungs, and at the same time purify the quality of the voice.

EXERCISE—PROLONGED VOICE.

Expand the chest, so as *fully* to charge the lungs with air, and, after pausing for a moment without emission of breath, sound the monophthongal vowels.

E, Eh, Ah, Aw, Oo,

as long as the sound can be steadily maintained. When the voice wavers and becomes feeble, stop, and begin again. After practice, and acquirement of the art of maintaining a steady, equable pressure on the lungs, the vowels should be continued *purely* for the space of about thirty seconds.

Another very useful exercise, and one by which the action of the glottis will be distinctly *felt*, consists in again and again *shutting off* and *recommencing* the sound. We may be understood, when we say that this is merely the preceding exercise, with the vowels *clipped* up in little pieces, instead of running out in one unbroken length. Each breath should last, at least, as long in this as in the preceding exercise. This principle of finishing sound should be applied to all FINAL VOWELS.

When the voice is feeble, or the lungs apparently weak, the above modes of practice will be of much benefit. To assist in the development of the chest and voice in children, the delighted urchins should be encouraged to

such noisy bawling, at convenient time and place. A strong middle tone is the best for ordinary practice, but, to strengthen particular tones, the voice may range from low to high, or from high to low. When the ordinary pitch of the voice is too high, the vowels may be practiced from high to low, beginning softly, and increasing in strength of sound as the voice descends. To strengthen the higher tones, which is seldom an object of necessity to a speaker, the voice may increase in energy as it ascends. In this way, the compass of the voice may be much extended, and a degree of mellowness and flexibility, seldom acquired without art, will be attained.

The *inflections* of the voice will be treated of in a subsequent chapter.

We have hitherto considered only the *formation* of voice. There are peculiarities of tone, arising from the way in which the voice is directed,—from the position of the soft palate, teeth, lips, etc. The soft palate is a curtain depending from the back of the mouth with a small tongue-like prolongation, called the uvula. The soft palate performs many important functions in vocal modulation and articulation. It acts as a *valve* to cover the inner nasal apertures, and so prevent the issue of breath or voice by the nostrils. The *contact* of the soft palate with the back of the tongue forms the English element NG, in which the voice passes entirely through the nostrils; its *approximation* to the tongue divides the vocal current into an oral and a nasal stream, and thus gives the peculiar character to the French elements *an*, *en*, *in*, *on*, *un*, and causes the

"nasal twang,
Heard at conventicle, where worthy men,
Misled by custom, strain celestial themes
Through the pressed nostril, spectacle bestrid."

The soft palate is in the same way *approximated* to the tongue for the English articulations M and N ; in forming which, the voice *escapes* by the nose only, but reverberates in the mouth ; where it is shut in, by the lips for M, and by the tongue and front of the palate for N. The action of the soft palate demands the attention of all who would speak with purity of voice and propriety of articulation.

EXERCISE—SOFT PALATE.

Let the student place himself before a glass,—his back to the light,—and, opening his mouth, inhale breath deeply but *noiselessly*. If he does not, in this process, elevate the soft palate, and depress the tongue, so as to form a visible *arch* of considerable height and breadth, he will be the better of practice for that purpose. Let him *retain* the velum* at the elevation he obtains, as long as possible, dwelling on the open vowels *ah* and *aw*, without allowing it to fall. He will distinctly *see* the position of this organ in sounding these vowels, and he may be able, by sensation and partial observation, to maintain it in the same position in sounding the closer vowels, e, eh, oh, oo, etc. In this way, a NASAL TONE will be purified, and that most disagreeable blemish of speech removed.

A GUTTURAL tone of voice arises, in a great measure, from the too close approximation of the tongue and soft palate, by which the uvula is laid in the way of the vocal current ; frequently a guttural tone arises from enlarged glands (the tonsils) and from contraction of the arch of the fauces, from whatever cause arising. The nature of the peculiarity indicates the means of cure. The more the arch can be *expanded*, the less guttural vibration can

*Velum pendulum palati—or soft palate.

there be. So far as faulty habit is the cause of the guttural tone, it will be susceptible of easy correction.

The quality of the voice is also affected by the position of THE TEETH. All the vowels may be sounded with the teeth closed, and they may all be sounded with the teeth considerably separated; but the tone of voice is very different in these cases. When the teeth are closed, the vocal current strikes against them, and becomes deadened and muffled. In the close vowels, *ee* and *oo* especially, the sound is frequently still farther deteriorated in quality by a degree of *vibration* in the teeth.

The teeth should never be closed in speech, but, on the contrary, should be kept as open as possible, to allow the voice to come freely out from the seat of its formation.

The LIPS, too, influence the tone of the voice. The best advice for any peculiarity arising from a faulty disposition of the lips, is—*never use these organs in speech where their action is not indispensable*. The most common faults are projection, and pursing, or contact of the corners of the lips, or of one corner, contracting the aperture or making it incline to one side of the mouth. By these ungraceful habits, the quality of the voice is variously affected. The lips should take the form of the range of the teeth,—but without constraint,—and should move in a vertical direction only. Any great deviation from this rule is inelegant, and injurious to the tone.

Huskiness of voice, we have thus seen, is owing to a faulty formation of voice,—to insufficient glottal vibration; and other peculiarities of tone arise generally from modifications of the mouth—the channel through which the vocal current flows. *Exercise*, conducted on natural principles, will be found the best specific for improving the voice, strengthening the lungs, and regulating all vocal action.

VOWELS.

THE glottis produces voice; the shape of the mouth gives VOWEL character to the voice. Variations of musical pitch, of acuteness and gravity in the sounds, are caused by variations in the larynx* and glottis; but all *vowel* variations are produced by changes in the shape of the oral passage. The action of the hand enclosing the open end of a vibrating reed or quill modifies the sound sufficiently to illustrate the effect of similar modification on the glottal sounds. Thus: close the hand around the quill,† so as to leave a very contracted aperture for the passage of the sound, and then expand the fingers, and the vowels *oo* and *ah* will be produced. Reiterate the actions rapidly, and the hand will give out no bad imitation of a cat's wawling —*w-ah-oo—w-ah-oo—w-ah-oo*. The apparatus of the mouth is wonderfully calculated to effect the most minute and delicate changes with definiteness and precision. Nature must ever be infinitely superior to art; yet art has accomplished the mechanism of the vowel sounds in various ways, and has even effected intelligible imitations of all the elements of speech. De Kempelen constructed a speaking machine; and, recently, the highly ingenious speaking automaton of Herr Faber was exhibited in this country.‡ Mr. Willis, another

* The larynx is the box-like arrangement of cartilages at the top of the wind-pipe, in passing through the aperture of which (the glottis) voice is produced.

† Page 21.

‡ This instrument illustrated perfectly the mechanism and mutual relations of the elements of speech. It was operated on by a key-board like that of a piano, containing a key for every attitude of the mouth, with one additional key governing the sound-producing part of the apparatus, and an extra key for opening the nasal tubes. Thus: on pressing the key for P, an explosive emission of air came from the anterior part of the mouth; on pressing the P key and the voice key simultaneously, the sound of B was produced; and on pressing the P key, the voice key, and the nasal key, the sound of M was heard. A separate set of keys acted on the vocalizing apparatus so as to produce changes of musical pitch; and by using both ranges of keys the instrument sang as well as spoke.

philosophical inquirer into the mysteries of this subject, found that the vowel sounds might be imitated by drawing out a long, straight tube from a vibrating reed. "In this experiment he arrived at a curious result; with a tube of a certain length the series of vowels

i, e, a, o, u, (=ee, \bar{a} , ah, oh, oo)

was obtained by gradually drawing it out; and if the length was increased to a certain point, a farther gradual increase produced the same sequence in an inverted order, u—o—a—e—i; a still farther increase produced a return to the first scale, and so on."

Our own experiments corroborate this sequence as the natural order of these five vowels; but we have carried out the principle much further, and constructed a scheme which includes, in regular progression, all the vowels in the English language, besides several others characteristic of dialects, and of the French and other languages. The arrangement, besides, admits of the addition of any other recognizable vowel formations, so as to form a complete scale of natural or possible vowel sounds.

If the second of Mr. Willis's series, e (= \bar{a}), we reasoned, can be obtained by mere elongation of the sound conductor, beyond its dimensions for the production of the first i (=ee), the change from ee to \bar{a} will probably be gradual; and, if so, the interval between the two sounds must yield some intermediate varieties of vowel quality. It should be possible, we thought, to pass from sound to sound by such delicate progression as to exhibit vowels in the same softly blending relation that is seen in colors, where melting shades almost imperceptibly lead the eye from one to another of the prismatic series. And this is possible.

The following simple but conclusive experiment was

one of our early landmarks in the discovery of vowel principles ; and it may serve to give the student a clear idea of the nature of vowel formation, and of the vowel unity of the voice as emitted from the glottis.

Prolong with open mouth the vowel *ah*, and, while doing so, gradually cover the mouth with the hand, by laying the fingers of the right hand on the left cheek, or *vice versa*. At every stage of this process, the ear will recognize a change of vowel quality ; the sound will become modified to

U(rn), A(ll), O(re, O(we), Oo(ze),

by the mere contraction of the external aperture, while the internal channel of the mouth remains uniformly extended.

There are two great agents in vowel modification, the lips and the tongue. The lips, by their approximation, externally contract the oral aperture ; and the tongue, by its elevation towards the palate, internally diminishes the oral channel. The effect of the *labial* approximation is, what we have seen to result from covering the mouth with the hand, viz., modification of the vowel quality from *ah* to *oo*. The effect of the lingual approximation is, similarly, to modify the sound from *ah* to *ee*.

The arrangement of the lips, then, produces one set of vowels, and that of the tongue, another ; though, perhaps, few of the vowels owe their formation to either organ *independently* of the other. The labial vowels require an expanded internal channel ; to maintain which the tongue is slightly depressed at the root, as the labial aperture contracts ; and the lingual vowels require a clear and broad external aperture ; to maintain which the lips are gradually elongated as the tongue rises within the

arch of the palate. This gives to the vowels from *ah* to *oo* a solemn and sombre character, associated as their mechanism is with a "long" face and gloomy contraction of the lips; and to the vowels from *ah* to *ee*, a sprightly, mirthful character, associated as their mechanism is with a "broad" face and smiling elongation of the lips.

From the mutual independence of the vowel modifiers—the lips and the tongue—it is obvious that their vowel positions may be assumed either separately or simultaneously, or variously combined. This is an important fact, to the discovery of which we were led in our experimental endeavors to find the exact formation of the vowel in *sir*, *her*, etc., and of a peculiar, close sound, which some Irish pupils gave for the vowel *oo*. When the principle of separate and simultaneous labial and lingual vowel formation revealed itself, these and all other tested sounds found at once their proper place in the triple scale of *lingual*, *labial*, and *labio-lingual* vowels. In the labio-lingual class will be recognized those common French and German vowels, which give such trouble to English learners of these languages,—the *u* and *eu* of French, or *ü* and *ö* of German. A knowledge of the mechanical formation of these sounds will remove all difficulty in pronouncing them. With the exception of the sound in *sir*, *her*, etc., the labio-lingual contains no genuine English vowel.

We recognize altogether eight vowel positions on the lips, and the same number on the tongue, with, of course, an equal number of combined or labio-lingual positions; giving in all twenty-four varieties of vowel sound. But the plasticity of the organs is so great, that shades of vowel quality are endless, arising from infinitesimal

differences in the relative positions of the lips and the tongue. The number of possible variations can as little be estimated as the number of possible shades of color. The eight vowel positions which we shall now describe form a well defined and standard scale, to which all differences in dialects and individual pronunciations may be referred, and by which irregularities may be corrected.

STANDARD SCALE OF VOWELS.

FIRST VOWEL POSITION.

The first and last of Mr. Willis's series are the close labial and the close lingual vowels *ee* and *oo*. The approximation of the organs in forming these vowels is so close, that any further contraction of the oral aperture creates a *vibratory effect upon the tongue or the lips*, and so converts *ee* into the articulation Y, and *oo* into the articulation W.

The *simultaneous formation* of *ee* and *oo* produce the peculiar Irish sound before mentioned, which is also heard in some of the American dialects, instead of *oo* or *ü*.

EE, then, is the *1st lingual vowel*; *oo*, the *1st labial vowel*; and the *compound formation* of *ee* and *oo*, the *1st labio-lingual vowel*.

SECOND VOWEL POSITION.

The tongue a little depressed from its elevated position at *ee* gives a vowel intermediate in form and effect to *ee* and *ā*. This is the sound of *i* as in *ill, is, it, etc.*, which is therefore the *2nd lingual vowel*.

The lips lightly separated from their close position at *oo* produce a sound intermediate to *oo* and *ō*, which is heard in some English dialects instead of *ō*; as, in Lancashire, "Put some coal" (*almost, but not quite, cool*) "on the fire." This, then, is the *2nd labial vowel*.

These two formations, combined, produce an appreciably different sound from the first labio-lingual vowel—intermediate to it, and the next vowel *û* French or *ü* German. This is the *2nd labio-lingual vowel*.

THIRD VOWEL POSITION.

A further slight enlargement of the oral apertures, by the depression of the tongue, or by the separation of the lips, produces *ā*, the *3rd lingual*, and *o*, the *3rd labial vowel*.

The union of these formations gives the French sound of *u*, as in *une*, *bût*, *lû*, etc., which is therefore the *3rd labio-lingual vowel*.

It is to be remarked of the two correspondent sounds *ā* and *ō*, as a curious peculiarity, that in English usage they are both diphthongally terminated with the closest vowel of their respective classes,—*a* with *e*, and *o* with *oo*. The omission of this final element of these beautiful vowels is a marked provincialism.

FOURTH VOWEL POSITION.

A further slight opening of the vowel apertures from the 3rd lingual position produces a sound heard (short) in Scotland instead of the 2nd lingual, in such words as *ill*, *in*, *sit*, etc., and very generally heard (long) in London instead of the 3rd lingual, as the radical part of the diphthongal *ā*; as in *day*, pronounced nearly but not quite *deh-y*; and, from the labial position, a correspondent enlargement produces the monophthongal sound of *o* as heard in English before *r*, in such words as *ore*, *four*, *soar*, etc.; and in French as the regular sound of *au*, *eau*, etc.

The labio-lingual vowel resulting from the combination of these positions occurs as a provincial peculiarity in England, instead of the more open vowel correctly heard in such words as *sir*, *her*, etc.

FIFTH VOWEL POSITION.

An increased depression of the tongue gives the formation of the sound heard in *e(re)*, *ell*, *end*, etc., the *5th lingual vowel*; and a correspondent increase of the labial aperture from *o(re)* gives the vowel heard in *all*, *saw*, *on*, etc.,—the *5th labial formation*.

From the combination of these positions results the vowel represented by *eu* in French, and by *oe* in German.

SIXTH VOWEL POSITION.

The next degree of openness produces, in the lingual series, the sound heard in *an*, *at*, etc.; and in the labial series, the vowel heard in Scotland, in such words as *up*, *urge*, etc.

The combinations of these positions gives the peculiar English sound which is associated with the letter *r*; as in *sir*, *her*, *earn*, *paper*, *martyr*, *theatre*, etc.

As before observed, few of the vowels owe their formation to labial or lingual position alone; there is for every vowel a necessary arrangement of the whole mouth; but the preceding sounds are formed by so evident a proportion of the one over the other, that their being called respectively *labial* or *lingual* vowels, will be perfectly intelligible. The sounds which follow, however, are dependent chiefly on the *internal* arrangement of the mouth, and do not so obviously fall under the same classification. The lips are well spread and open, and the tongue well depressed, so that the changes of organic arrangement are less manifest; but the vowels are all in regular progression, from close labial and close lingual forms, and do, therefore, truly belong to one or other of these classes. Positions intermediate to any two, likewise, may still be

formed, though, from the necessarily slight differences between their effects, ears untrained to very accurate observation, may think them, in their separate utterance, "distinctions without difference." On such minute distinctions, however, often depends the very important difference between a cultivated speaker and an uneducated or a provincial one.

SEVENTH VOWEL POSITION.

The next more open vowels than *a(n)*, the 6th lingual, and *u(p)* Scotch, the 6th labial, are two sounds intermediate to these vowels and the most open sound *ah*. The former is heard in such words as *ask*, *past*, *bath*, etc. ; and the latter is the regular sound heard in the English utterance of such words as, *up*, *urge*, etc. Let a Scotch and an English speaker pronounce any words of this latter class, and the difference will be readily recognized by any ear.

The 7th labio-lingual position gives a shade of sound which occurs as one of the many modes of pronouncing the vowel in *sir*, *her*, *fir*, *girl*, *earth*, etc. These words, in district and individual peculiarities, exhibit every possible variety of labio-lingual sound, from the close *seur* of the rustic Yorkshireman, to the open *sah* of the untaught Cockney.

EIGHTH VOWEL POSITION.

In the open vowel *ah*,—called the Italian *a*,—both classes of vowels terminate. The lips are fully spread, the tongue lies flat, and the whole mouth is in even neutrality between the two modes of vowel formation.

The subjoined diagram may help to make this altogether new subject more intelligible to the reader. Let those who feel interested in this department of knowledge

test our classification by experiment, and we believe that its correctness will not be disputed. If this be so, what an assistance must it prove to the student in acquiring, and to the teacher in imparting, foreign pronunciations !* Even those common French sounds, *u* and *eu*, are so awkwardly attempted by our countrymen, in the absence of a knowledge of their formation, that they are often imperfectly acquired, even in a four or five years course of instruction in French. Yet, with a knowledge of the mechanism of these sounds, who could be four hours, or even many minutes, in mastering them ?

GENERAL VOWEL SCHEME.

LINGUAL.	LABIO-LINGUAL. Irish Variety of	LABIAL.
1 e	1 oo	oo 1
2 i(n)	2	Provl. English o 2
3 a~e	French 3 u	o~ oo 3
Scotch 4 i(ll)	Provl. English 4 as in sir	o (re) 4
5 e(ll)	French 5 eu	aw 5
6 a(n)	6 er, ir	Scotch u (rge) 6
7 a(sk)	Variety of 7 er, ir	u (rge) 7
	8 ah	

* Since this was written, the author has had the gratification of hearing from a former pupil (the Rev. Mr. Robb, Missionary in Africa) that he had found the Vowel Tables in this work, and the principle of numerically noting vowel sounds, a very great assistance in acquiring the native dialects of Africa.

This table contains all the vowels that occur in modern European languages, besides several dialectic varieties. Any new sounds that may be met with in other languages may be added, so as to complete the scheme for any or for every language. In this way a system of notation might be constructed, by which all the sounds of any dialect might be represented intelligibly to readers of whatever country or tongue. A table of all recognised elements of speech on this natural principle of arrangement would be one step towards the realization of that indefinite philological speculation,—a universal language.

To find the place of any vowel not included in our scheme, put the mouth in the position for the closest vowels (*e*, *oo*, and the *intermediate sound* respectively), and from each of those starting points, very slowly enlarge the oral aperture till the most open position (*aĥ*) is reached,—of course continuing the voice the whole time. In one or other of the three gradations of sound so produced, the ear should be able to recognise the vowel sought for, and so ascertain its exact formation. By this experiment, too, the accuracy of the three sequences in our scheme may be satisfactorily tested.

We have given the formation of *twenty-two* vowels:—of these, *thirteen* are genuine English sounds. The mechanism and application of the latter we shall examine minutely.—See *Dictionary of English Sounds, Section First*.

VOWEL NOMENCLATURE.

The terms, *long*, *short*, *open*, *shut*, *slender*, *broad*, *etc.*, have been applied to vowels so unsystematically as to confuse very much the notions generally entertained with respect to vowel qualities. *Long* and *short* should be applied only to vowels which are essentially the same in

formation, and which differ in nothing but duration. But we find these terms used with reference to sounds which are so different in their structure that no change of duration can assimilate them. Thus, *e* in *them* is called the "short" sound of the "long slender" *a* in *tame*; *a* in *man* the "short" sound of the "long open" *a* in *father*; *i* in *him* is called the "short" sound of the diphthong *i* in *find*; and *o* in *not*, and *u* in *but*, are called respectively the short sounds of *o* and *u*, the long sounds being heard in such words as *owe* and *you*. Of the sound of *i*, as in *him*, Mr. Walker has said, "This sound is the sound of *e*, the last letter of the diphthong that forms the long *i*; and it is not a little surprising that Dr. Johnson should say that the short *i* was a sound wholly different from the long one."

The lexicographer had, however, in this case, discriminated better than the orthoepist; for the "short *i*" is a distinctly different formation from either element of the "long one." Mr. Walker considers that the words *bid*, *lid*, *rid*, and *bead*, *lead*, *read*, differ only in the *quantity* of the vowel,—for *i*, he says, is but the short sound of *e*; and this theory, taken up without examination, is still to be found published and republished, in violation of what the dishonored ear would, if consulted, at once show to be the truth. Consistently with this theory, Mr. Walker calls the Scotch pronunciation, *vee-sion*, *decee-sion*, etc., for *vision*, *decision*, etc., simply a lengthening of the English sound. Now, the tendency of all vowels is to *open* in prolongation; but "short *i*" is more open than *e*, and would not therefore naturally be lengthened into *e*. On the contrary, if any person, guided by his ear, and not by preconceived classifications, strive to lengthen the generally short vowel *i*, in *vision*, *him*, *ill*, etc., he will find that the tendency of the prolonged sound will be towards *a* rather than *ee*.

This may be tested by singing the words to long notes.

Long and *short* are qualities that cannot be predicated as essential characteristics of any simple vowel; for every vowel may be indefinitely prolonged by those who have sufficient power over the vocal organs to retain them steadily in the vowel position. A person accustomed to the vowel in *nun*, short, as we generally have it in English, may essay in vain to prolong it with purity; but a Welshman, who is accustomed to the sound as a long vowel, will give it any degree of duration with ease.

The terms *long* and *short* are, in this work, used only with reference to the same radical sound.

It is to be observed, that the long forms of vowels have a more free and open aperture than the short ones. The modification of the mouth is the same, but *on a larger scale*. Thus the vowels in *could* and *cooed*, in *pull* and *pool*, in *very* and *vary*, in *not* and *nought*, are long and short degrees of the same vowels; and the aperture of the mouth for the prolonged sounds is generally more open than for the short, while it is of the same shape, and gives essentially the same character to the voice.

Open and *shut* are terms, too, very faultily applied to vowels, as no vowels are ever *shut*; and all vowels must be *open*, if these words have any reference to the oral aperture. Vowels are said to be shut, by Mr. Walker, when they do not terminate syllables, and open, when they do, but the division of words into syllables is too arbitrary for any such distinction. Long vowels are frequently "*shut*," and short ones "*open*"; so there can be no utility in a classification so vague. Besides, the junction of an articulation does not affect the formation of the vowel; whether alone or in articulate combinations, the vowels are finished where they are produced—viz., in the glottis.

Articulations subjoined affect the *length* of vowels; but the term "shut," or any other, to signify this, would be useless, as all articulations do not affect the vowels alike.

Broad and *slender*, also, are terms of no utility. They are applied to vowels utterly unlike in every characteristic of sound. *A* in *fate* is called the slender sound, and *a* in *fall*, the broad sound of the same letter. A classification founded, like this, on letters, must lead to confusion, while letters are so indiscriminately used in our orthography. We have the same letters representing half a dozen different sounds, and the same sounds represented in more than a dozen different ways.

Discarding all these names, then, we shall adopt a simple numerical notation and nomenclature for vowels. In this way we shall be the better able to fix the student's attention on *sounds*, irrespective of letters, and to direct with certainty to the practice and application of any vowel sound in connection with whatever vowel letter or combination of letters.

The following is a table of the English vowels numbered from 1 to 13. Those which, when accented, are always long, are marked (-); those which are always short, (v); and those which are sometimes long and sometimes short, (-v).

NUMERICAL NOTATION OF ENGLISH VOWELS.

1 (-)	eel	pull, pool	(v-) 13
2 (v)	ill	old	(-) 12
3 (-)	ale	ore	(-) 11
4 (v-)	ell, ere	on, all	(v-) 10
5 (v)	an	up, urn	(v-) 9
6 (-)	ask	earn	(-) 8*
		7 (-) ah	

*The precise formation of this vowel is given at page 26. All the other sounds fall exactly into their proper places in this arrangement.

The above thirteen sounds are all radically different. There are, besides, in English three diphthongal combinations: 7·1—isle; 7·13—owl; 10·1—oil.

The alphabetic sound of *û* (y·13) is No. 13 preceded by the articulation *y*, *û* being the same in sound as *you*.

This classification of English vowels may at first sight be thought too difficult for general adoption, but it is, in reality, greatly more simple than the ordinary arrangements. True, we require a separate notation for thirteen sounds in English,—and alphabetic learners, we may be told, have, on the old plan, but five characters to commit to memory. But *have we only five sounds?* While we possess thrice the number of vowel sounds that we have of letters, it is folly to think of teaching the sounds *by the letters*. Each letter has to be studied as representing many sounds; and a tedious enumeration of diphthongs and triphthongs, arbitrarily compounded to the eye, though generally simple to the ear, have to be committed to memory, as symbolic of an immense plurality of sounds. By our plan, thirteen sounds must be associated with thirteen invariable marks, and there the difficulty ends. We may retain our irregular orthography as long as we like, and trouble our youth little about it, if we only teach them to associate vowel *sounds* with a simple numerical notation.

To show the minute accuracy with which Pronunciation may be noted and taught by means of this vowel scheme, the following marked passage is inserted.*

* Exercises on the Numerical Vowel notation will be found in the Nursery Book of "Letters and Sounds," and in the "Elocutionary Manual" of Principles and Exercises.

7-1 2 8 2 8 2 7-1 9 8 5 6 1 9 10 10
 By the† term Liberty, I understand a freedom from all
 1 10 2 2 2 2 4 4 10 11 5 2 2 8 y.13 5 1 2 9
 responsibility, except what morality, virtue, and religion
 2 12 5 2 1 12 2 2 8 2 2 2 10 12 5 2
 impose. That is the† only liberty which is consonant with
 2 13 2 8 4 10 5 1 12 2 2 8 2 5 4 8
 the true interests of man—the only liberty that renders
 2 5 12 13 9 2 2 4 12 8 6 4 5 5 2
 his association with his fellows permanent and happy—
 1 12 2 2 8 2 5 3 4 2 2 6 1 13 10 9 6 0
 the only liberty that places him in a peaceful, honorab^{le},‡
 5 10 8 9 10 y.13 2 2 1 12 2 2 8 2 5 8
 and prosperous community—the only liberty that makes
 2 2 9 10 6 5 1 13 2 5 2 2 2 4
 him the son of a land that he would inhabit till his death,
 5 2 9 4 10 6 8 5 1 13 1 4 2 2
 and the subject of a state that he would defend with his
 10 8 2 5 2 9
 property and his blood.

THE ASPIRATION H.

All the vowels are, of course, *vocal*; but it must be evident from preceding explanations, that the vowel positions of the lips and tongue may equally modify a *voiceless* current of breath. In this way is produced a common element of language—the aspiration H. H is simply an expulsive whisper of the vowels; the organs are adjusted to the vowel position before the aspiration of H is emitted. Thus, *h* in *he*, *hay*, *high*, *hoe*, *who* has a very different effect—just as different as that of the vowels themselves in these words. H is to the vowels,—exactly what P is to B, F to V, S to Z, etc.,—a breath variety of the same formations. How then, it may be asked, can *h* be recognized in whispering? H differs from a whispered

† The article *the* is pronounced th² before any articulation and before the 1st vowel; and generally th¹ before any other vowel.

‡ The notation indicates a *syllable* without a vowel.

vowel in the greater openness of the glottis, and consequent looseness of the emitted breath. In whispering a vowel or a vocal articulation, a *glottal* effort and effect are distinctly felt and heard. H is a mere expulsion of breath through the perfectly open glottis. Let this be tested in the whispered utterance of such words as *is* and *his*, *eel* and *heel*, *art* and *heart*, *old* and *hold*, etc., and the difference between H and a whispered vowel will be manifest.

All the elements of language then, vowel as well as articulate, may be classed under the three heads,—BREATH, VOICE, and NASAL. H represents the breath forms of the vowels; and their nasal varieties are the French elements *an*, *en*, *in*, *on*, *un*,—thus :

GENERAL CLASSIFICATION OF THE ELEMENTS OF SPEECH.

BREATH :	VOICE :	NASAL :
H	All Vowels.	French Semi-nasal Vowels.
Voiceless Articulations.	Vocal Articulations.	Nasal Articulations.

Before entering on the theory of articulation, we must notice more fully these peculiar French sounds—to which we have hitherto merely adverted.

FRENCH SEMI-NASAL VOWELS.

This formation of vowel, common in French, finds no place in correct English utterance. The only nasal sounds in English are M, N, and NG, in forming which the voice issues entirely by the nostrils. The soft palate is depressed sufficiently to uncover the inner nasal openings and divide the stream of voice into a nasal and an oral current. The former escapes freely, the latter is stopped,

by the conjoined lips, for M ; by the forepart of the tongue applied to the palate, for N ; and by the root of the tongue and palate for ng. M and N are heard in French, but the beautifully expressive bell-sound NG does not occur in that language. Instead of this, however, there is a series of semi-nasal sounds, represented by *an, en, in, on, un*, and by various other literal combinations. In forming these, the soft palate is depressed sufficiently to open the nasal passages, but not so much, as by contact with the tongue, to obstruct the passage into the mouth. This is the difference between the English *ng* and these French elements which give so much difficulty to English learners of French. The English *ng* brings the tongue and soft palate *in contact*, and consequently prevents the issue of breath by the mouth. NG has always, therefore, a uniform sound ; it is incapable of any change of vowel quality. The French sounds, having an oral as well as a nasal passage, are capable of being affected by changes in the position of the mouth. There are four recognized varieties of them.

French grammarians evince a high antipathy to the imputation that their language contains a greater number of nasal sounds than the English. They grant the ungracefulness, generally, of such sounds, and exultingly point to the *three marks* of our nasal elements, while they have but two (*m* and *n*), as a proof that the English language has in reality the unenviable superabundance. But the French has unquestionably *six* nasal sounds, four of which are vowels, that is, they are formed by an open *position*, and not an appulsive *action* of the organs ; and two are articulations. There are, therefore, in French unquestionably double the *number* of the English nasal elements. Yet, in truth, the English *three* occur as

frequently in speech as the French six; but from their "liquid," or, as we should say, transparent nature, they are often little more than perceptible: they do not strike the ear with half the sense of nasality that the long French elements do. When the English nasals are before voiceless articulations, as in *lamp, tent, prince, inch, ink, etc.*, they are so abrupt as to be scarcely vocal: and only when they are final, or before voice articulations, as in *some, son, sung, anger, amber, wander, etc.*, are they correctly *capable* of prolongation. The numerous terminations in *ion, ing, nt, nd, nk, nce, etc.*, produce a very frequent recurrence of them, but it is in unaccented syllables, where their natural abruptness is shortened to the utmost. The French nasals, on the contrary, are never short; but, in most instances, they are the longest sounds in the language; and they linger in the unhabituated ear with an effect which makes the language seem to be almost altogether nasal. And there can be no doubt that the habit of forming sounds of this mixed character must incline the Frenchman to give a partial nasality to many other vowels than those which are legitimately nasal.

With reference to the formation of the semi-nasal vowels, it is amusing to see the way in which the French grammarians account for their nasal quality. In a well known grammar of French Rhetoric, we find the following description of the "organic formation of French nasal vowels": "The formation of the nasal sound *appears* to be generated chiefly from the nostrils"—(all vocal sounds are generated in the glottis)—"not that the sound is *exhaled* from them, as is erroneously supposed by many, but the air, *ascending* at first from the lungs *to the nose*, *seems* to acquire there a nasal power; and *descending* afterwards *into the mouth*, it produces, *coming in contact*

with the atmosphere, that nasal sound which, *although not very gracious*, is sometimes manly and powerful." In giving directions for the formation of these sounds, the author adds, "Let the air, by an internal motion, be sent immediately from the throat into the nostrils," * * * "it will then *descend into the mouth*, and come out with a nasal power."

What a most extraordinary power of direction the French must possess, if they thus manage to make the obedient vocal stream flow into the open nostrils without passing through them! But the thing is absurd. All the air in the nostrils will "come in contact with the atmosphere" *from the nose*; it must pass through, unless the nostrils be plugged up by snuff or polypus, pinched with the fingers, or otherwise obstructed. And though the nostrils are obstructed, the voice may still get its "nasal power" *in them*; for, as these elements have a partial channel in the mouth, they are not liable to be more affected by nasal obstruction than to have their sound slightly muffled. In this respect they are unlike the English elements M, N, and NG, which, having no oral opening, must have a free nasal passage, or the obstructed breath will collect in the pharynx, and become percussive; so that M, N, and NG will be converted into B, D, and G, with that muffled nasal murmur with which every sufferer from "cold in the head" is quite familiar. The French grammarians indeed seem ashamed to confess their obligations to the nose, though they are clearly indebted to that organ for the modification of a large proportion of their sounds.

To show the difference in *quantity* between the English and French nasals, take any words in the two languages, having an equal number of them, and contrast their pro-

nunciation. The English word *transcendent* contains as many nasal elements as the French *transcendant*, but they do not produce *one-fourth* of the *quantity* of nasal sound; and many French phrases may be found which do not contain a single oral vowel, as, for example, "*pendant long temps*;" "*l'enfant mangeant son pain*," etc.

A partial nasality of vowels is one of the most prevailing features of the American dialects. Very few transatlantic speakers are perfectly free from this habit, especially when vowels precede or follow M, N, or NG. The influence of imitation, and the almost universality of the custom, render the correction of this vice, and even its recognition as a characteristic, peculiarly difficult to those who are "to the manner born."

In English, the slightest nasal quality in a vowel is an impurity and a barbarism.

ARTICULATIONS.

ALL actions of the vocal organs which partially or wholly *obstruct*, or which *compress* the breath or voice in the mouth, are called ARTICULATIONS. The necessary effect of such obstruction or compression is a degree of percussiveness in the breath, when the conjoined or approximated organs are separated. Hence arises an element of audibility, produced *by or within the mouth*, which we have stated to be the distinguishing characteristic of this class of the elements of speech.

When the current of breath (unvocalized) is altogether stopped by organic contact, as in P, T, K, the only audibility that the letter so formed can have is the slight puff or *explosion* which follows the separation of the

organs. This must, therefore, be clearly heard, or the letter is practically lost. In the mode of producing this little effect, is involved one of the most important principles of speech,—a principle on the right application of which depends much of a speaker's distinctness, and all his ease.

Pronounce a word ending with P, T, or K,—as *lip*, *lit*, *lick*,—and endeavor to make the final letter as *long* as possible :—The effort only prolongs silence ; for, until the articulating organs are separated, there is no sound of voice or breath. The *separation* of the organs, after contact, is thus necessary for these letters ; and on this disjunction the compressed air within the mouth makes its escape. Now, here lies the point of importance. If only the breath *in the mouth*, and not that in the lungs, be ejected, a distinct, sharp, quick percussion will be heard, which gives to these shut breath articulations all the audibility of which they are susceptible. The issue of breath from the glottis must be checked at the instant of separation of the articulating organs. The explosive effect of the letters is thus produced with almost no expenditure of breath.

The common error opposed to this may serve to make the principle more intelligible. It consists in allowing the chest to fall, and continuing the flow of breath after the separation of the organs, as in making a prolonged H, thus :—*lip-h-*, *lit-h-*, *lick-h-*, etc. The letters are by this fault deprived of their essential percussive quality, and the resources of the strongest lungs are drained most exhaustingly, and, in public speaking, to the great injury of health.

This very faulty mechanism of these letters is almost always found in cases of *stammering* ; and, in a certain

degree, it prevails among all speakers who complain of weak voices, or of exhaustion from vocal effort.

Such speakers are sufferers only from ignorance. An organ of power lies dormant within them, the want of whose natural action is painfully and ineffectively supplied by unnatural and debilitating efforts of the organs of respiration. This explosive apparatus is the *Pharynx*. The Pharynx is a distensible cavity situated at the back of the mouth; below it is the glottis, in front of it the mouth, and, opening from it above, are the *nares* or nostrils. When the soft palate covers the upper pharyngeal openings—the nares,—the effort of expiration sends the breath into the *mouth*, where, if obstructed in its passage, it will collect, and *distend the pharynx* to a greater or less extent, according to the degree of oral contraction or obstruction, and the force of expiratory pressure. When the oral obstruction is complete,—as in forming P, T, K, B, D, G,—the pharynx should so dilate with the momentary pressure of breath that, on separation of the articulating organs, the natural contraction of the pharyngeal muscles effects the percussive audibility of the letters.

When the lips are in firm contact, as for P, a sufficient pressure of breath *must* cause distension either of the *cheeks*, the *lips*, or the *pharynx*. Here, then, is an outward index by which any person may direct his own practice for the acquirement of pharyngeal power. Give all possible stress to the effort of expiration while the lips are *steadily* closed, and if the cheeks and lips be not allowed to inflate, the pharynx must distend, and may be felt distending by grasping the neck close to the chin. On separating the lips, the breath within the mouth and pharynx will escape, but it should do so without further emission from the glottis. The same mode of practice

may be adopted with the actions T and K, and with the correspondent *vocal* forms of these articulations, as explained farther on.

The want of pharyngeal power manifests itself in various ways: by distension of the lips and cheeks for P, B, as above noticed; by protrusion of the tongue, with incontinency of breath, for T, D, K, G; by laborious actions of the chest to create the explosive audibility of these letters; by their frequent inaudibleness from feeble action; by scattering the saliva for S, F, and other Continuous elements; and by general indistinctness of articulation, and laxity of the lips and tongue, giving a lumpish, cumbrous, and lazy appearance to the mouth.

The continuous use of the chest instead of the pharynx is painfully fatiguing in speech; and its inordinate employment in forcible utterance is directly productive of serious injury to the lungs.

The practical effect of proper pharyngeal action and buoyancy of the chest in oratory is to enable the speaker to deliver the longest address with sustained energy, in perfect ease, and without after exhaustion. The rich orotund voice of the practiced orator is due to the elasticity of the pharynx; the finest effects of *crescendo* and *diminuendo* in singing are owing to the same cause; and the weakest voice may be greatly increased in volume by the cultivation of this important organ.

Every possible action of the mouth may modify either whispered breath or *voice*, and thus, from each action, two distinct elements of speech are produced. The classification into BREATH and VOICE ARTICULATIONS thus reduces the number of elementary actions of speech to half its apparent amount.

The distinction between the vocal and voiceless

articulations should be clearly understood. The compilers of many well known books of reference seem to have had no knowledge of it. For instance, we find the letters P, T, K classed as "mutes," and B, D, G, as "semi-mutes." The extraordinary name of "demi-semi-vowels" has been by one author invented for the last three elements.* Sometimes the terms "sharp" and "flat," "hard" and "soft," are used; but such names are unphilosophical and worthless, as they convey no just idea of the real difference between the elements. From the existence of such a nomenclature, it would seem as if a veil of most impenetrable mystery shrouded the vocal principles from observation—or else, as if those who had invented and applied the names had never troubled themselves to become observers at all. Counterparts of the following descriptions may be found under many authorships.

"*B* is pronounced by pressing the *whole length* of the lips together, and forcing them open with a strong breath."

"*P* is formed by a slight contraction of the *anterior part* of the lips."

"*D* is a *dental* articulation, having a kind of middle sound between the *t* and *th*; its sound being formed by a *stronger* impulse of the tongue to the *upper part* of the *mouth* than is necessary in the pronunciation of *t*."

"*T* is numbered among the mutes or close articulations; and it differs from *D* chiefly in its *closeness*, the *strength* with which the breath is emitted in pronouncing *t* being all that distinguishes them.

"*K* is usually denominated a guttural, but is more properly a *palatal*, being formed by pressing the root of

* See "Chambers's Elocution."

the tongue against the *upper part of the mouth*, with a depression of the lower jaw, and opening of the teeth."

"*G* has two sounds; one called that of the *hard G*, because it is formed by a pressure, somewhat hard, of the *fore part of the tongue against the upper gum*. The other sound, called that of the *soft G*, resembles that of *J*." Then, if we turn to *J*, to be informed what this *indefinable* sound of soft *G*=*J* is, we are told,—"*J* has invariably the same sound with that of *g* in *giant*."

B and *P* are thus made to differ only in the *quantity* of lip compressed: *D* is said to have a *stronger* impulse of the tongue than *t*, and to be a middle sound between *t* and *th*, while, we are told, *t* is distinguished from *d* by nothing else than the *strength* with which the breath is emitted. No analogous connexion is hinted at with reference to *k* and *g*; but, on the contrary, *k* is to be formed by the *root* of the tongue acting upwards, and *g* by the *fore part* of the tongue acting forwards. In the latter case, the writer has evidently been thinking of the *name* of the letter (*jee*) while he is speaking of the "*hard G*," though, strangely enough, the name of the letter illustrates its soft sound. "*Hard G*" does not employ the fore part of the tongue, or the upper gum at all.

To those who really want the information, such careless misdirection must be most perplexing. No variation of the mode or degree of labial contact would ever convert *pillow* into *billow*, or *blunder* into *plunder*; nor could any alteration of lingual pressure or strength of expiration ever make *tame* become *dame*, or *drudge* *trudge*. *P* and *B*, *T* and *D*, *K* and *G* are pairs of articulations formed by exactly the same organic motions, the only difference being in the material which the actions modify; *whispered* breath in the one case, *vocalized* breath in the other.

MODES OF ARTICULATION.

There are four modes of Articulation, performed at different parts of the mouth: I. Complete stoppage of the breath by contact of the organs. II. Lateral Obstruction and Central Emission of the breath. III. Central Obstruction and Lateral Emission of the breath. IV. Lax Vibration of the approximated organs, in a strong current of breath.

Besides these modes of articulation, in which the pharynx is more or less distended by the outward pressure of breath, there is a *Converse Series*, in which the pharynx is collapsed by inward suction. The Hottentot Clicks and certain Interjectional sounds in civilized languages are of this class.

All articulation consists of *downward* action of the articulating organ. In most cases of stammering this action is reversed, and the force of articulation is thrown upward, and made conjunctive instead of disjunctive.

The organs employed in articulation are: I. The lips, in forming P, B, M, Wh, W, in which the principal action is performed by the lower lip acting downwards from the upper lip, the latter being either retracted slightly upwards, or remaining passive. II. The lower lip and upper teeth in forming F, V, in which the lip acts downwards, the teeth being necessarily and entirely passive. III. The tip of the tongue and upper teeth in forming Th, in which the tongue necessarily performs the whole action, being drawn downwards and backwards. IV. The tongue and various parts of the hard palate in forming S, Z, R, L, T, D, N, Sh, Y, in which the palate is entirely passive, and the whole action is performed by the tongue. V. The root of the tongue and the soft palate, in forming K, G,

NG, in which the action of the organs is mutual, the tongue acting downwards, and the palatal curtain acting upwards and backwards.

FIRST MODE OF ARTICULATION.

Complete Stoppage of the Breath by Organic Contact.

This mode of articulation is performed at three parts of the mouth : I, by the lips, forming P, B, M ; II, by the fore-part of the tongue and the palate, forming T, D, N ; III, by the back part of the tongue and the palate, forming K, G, NG.

The letters P, T, K have no other sound than the slight percussion which accompanies the act of separating the conjoined organs. The vocal cords are relaxed, and the glottis open as in ordinary breathing.

A common defect in the formation of P, T, K consists in making these letters *merely stops* of the voice without any audible effect in themselves. This arises generally from feebleness of action. If the fault were confined to conversational carelessness, it would be less worthy of notice ; but it is too common even in public speaking, and it is then very manifestly a defect. Pronounce the syllables *ap*, *at*, *ak*, without the percussive finish which we have stated to be essential to the correct formation of these letters, and none but a very attentive ear will recognize a difference between them. The public speaker must not trust to such a degree of eager watchfulness in his hearers to unriddle his ambiguities. His mouth must be so trained as to utter no "uncertain sounds."

The percussive effect of T is emitted over the sides, instead of the point of the tongue, before L, as in *outlet*, *battle*, *settle*, etc. ; and through the nostrils before N, as in *outnumber*, *kitten*, *mutton*, etc. When T is final in a word,

the tongue is completely disengaged from the palate in finishing the articulation.

In some districts of Scotland, a very peculiar substitute for the sound of T, medial or final, is common. This consists in an abrupt and audible closure of the glottis without any articulative action. This glottal catch is heard in such words as *let*, *catch*, *better*, etc., pronounced *lè'*, *că'ch*, *bě'er*, etc.

The letters B, D, G have precisely the same oral actions as P, T, K; but while the organs are in contact, the glottis is brought into sonorous position, and an instantaneous effort of voice is heard before the separation of the organs. It is important to have the power of producing this shut voice with precision. The sound cannot be prolonged, as there is no outlet for the breath. The murmur of voice can last only until the pharynx is fully distended.

Many persons are unable to vocalize these shut articulations, and consequently, words containing B, D, G are liable to be confounded with such as have the correspondent voiceless letters in the same combinations; as *dart* and *tart*, *dread* and *tread*, *bill* and *pill*, *bride* and *pride*, *gold* and *cold*, *glass* and *class*, etc. The Welsh always thus mispronounce English, but a little elementary practice will supply the deficient power in any case. Care must be taken that the voice does not find vent through the nostrils.* The percussive finish of B, D, G should be the same as of P, T, K.

The above six letters (three formations) are all the articulations that completely obstruct the breath. The

* In Chambers's Elocution, the student is actually directed to commit this barbarism. We read as follows: "The same disposition of the organs (as for P, T, K), with the sound directed to go forth partly through the nose, and partly through the mouth, form B, D, and the sound of G in game."

letters M, N, NG have the same oral positions, but the inner end of the nasal passages is uncovered by the soft palate, and, while the breath is shut in by the mouth, it escapes freely through the nostrils.

The actions of the mouth for M, N, and NG are precisely the same as for B, D, and G; and though the nasal articulations gain but little percussive audibility by the cessation of contact, yet they cannot, any more than the perfectly obstructive articulations, be considered finished until the oral organs are separated. There is breath within the mouth, pressing against the conjoined organs, and slightly distending the pharynx, as well as a free current in the nostrils; and though the *voice* may be perfectly finished by merely closing the glottis, the *Articulation* would be imperfect, if the breath within the mouth were not allowed to escape. There is thus a slight—but very slight—effect of percussion heard on the organic separation, as in *come, sun, tongue*, etc.; and when a vowel follows the articulation, this slight pharyngeal expression gives a sharpness and closeness of connection to the combination which would be wanting if the voice were stopped in the glottis before the organic disjunction. This principle is important to distinctness, and it is especially so in cases of imperfect or difficult articulation.

In finishing these nasal elements, the soft palate must not be allowed to cover the nares before the articulating organs are separated; for a momentary closure will convert M, N, and NG, into B, D, and G. A tendency to compress the breath in this way is especially felt in finishing *ng*, in the formation of which the tongue and soft palate are already in contact, and so in the position for G; to which *ng* is consequently more easily convertible than the other nasals are to their corresponding shut letters.

Many English speakers, particularly Londoners, are so much in the habit of finishing *ng* with a *g*, that, even after many attempts, they are utterly unable to make the nasal element singly. *Singer, hanger*, etc., they pronounce as perfect rhymes to *finger, anger*, etc. The opposite fault prevails in Scotland, where the latter words are pronounced so as to rhyme with the former.

The three articulations, M, N, and NG, are the only elements which employ the nose in English. We have correctly no semi-nasal sounds as in French; and as there can be no other *obstructive* articulation formed by the mouth than those we have enumerated, there cannot be any other purely nasal element in any language; for the breath must be in some way orally shut in before it can be directed entirely into the nostrils.

The English nasals are all *voice* articulations. It is, of course, possible to form them with unvoiced breath, and bad speakers often do so; but our language does not recognize such sniffing among its sounds. In Gaelic there seems to be, or to have been, an aspirate form of the nasal letters; *mh* is a common digraph in that language, but it is now generally sounded *v*, with this peculiarity, that it nasalizes the adjoining vowel. In a peculiar Scotch affirmative, of very frequent occurrence, which may be intelligibly represented by "mh'm," the voiceless *m* is heard between two vocal *m*-s.

We have now seen, from three articulations of the mouth, no fewer than nine distinct elements of speech produced. There are in English fifteen other *articulate elements*; these are the result of nine actions, six of which are used to modify both voice and breath, and three to modify voice only.

The remaining articulations are all *Continuous*; they have central or lateral oral apertures more or less free for the emission of the breath or voice.

SECOND MODE OF ARTICULATION.

Lateral Obstruction and Central Emission of the Breath.

The nine articulations already described; viz., P, B, M; T, D, N; K, G, NG; are formed, as we have shown, by organic *contact*. Similar dispositions of the mouth, but with the organs in contact only at the sides, so as to leave a central aperture for the emission of the breath, furnish a series of elements of the Continuous class.

This second mode of articulation is performed by the lips in making Wh, W; by the fore-part of the tongue and palate in forming S, Z, R; by the middle of the tongue and palate in forming Sh, Zh, Y; and by the root of the tongue and soft palate in making the German or Scotch guttural Ch.

When the breath passes between the *anterior* edges of the lips in close approximation, the effect of the breathing resembles the sound of F. The Spanish B is articulated in this way, but with vocalized breath, its sound consequently resembling V. When the aperture of the lips is slightly enlarged by the separation of their anterior edges, and the breath passes between the *inner* edges of the lips, the effect is that of the English Wh, W; the former being the voiceless, the latter the vocal form of the same articulation. The lips must be in sufficiently close approximation to present a degree of resistance to the breath, or the W will lack that faint percussive quality which alone distinguishes it from the vowel oo (No. 13). The close resemblance of W and oo has baffled the observation of grammarians and orthoepists, and led them into confused

definitions of these sounds, and of their respective classes, "Vowels" and "Consonants." W is an articulation or "Consonant," in virtue of its necessary pharyngeal or percussive effect, and oo is a vowel, in the absence of this articulative quality.

The letter W is, however, often written in English when there is no sound of the articulation, as in *owe*, *saw*, *few*, etc. W is pronounced only at the beginning of a syllable. When initial W is followed by oo, as in *woo*, *wood*, *wound*, etc., the combination, which is somewhat difficult to unaccustomed organs, exemplifies the difference between the articulation and the vowel of similar formation.

The effect of the articulation W may be produced with lateral apertures instead of a central opening, and the difference to the ear is scarcely perceptible. W with this formation, however, gives a constrained and severe appearance to the mouth.

The plasticity and mobility of the tongue enable that organ to take a variety of palatal approximations, and to give origin to the greater number of the articulate elements of speech. When the tip of the tongue is expanded and presented to the upper gum, so as to leave a small central aperture for the emission of the breath, the hissing sound of S is produced.

The nearly horizontal position of the tongue for this element requires the teeth to be very closely approximated,—but without touching; if the jaws are too much apart, the tongue cannot sufficiently contract the sibilant aperture, and too much breath escapes; while, if the teeth are perfectly closed, the breath strikes against the teeth, or is forced to pass through their interstices, and thus acquires a lisping modification.

The articulative position of S, giving sibilation to

vocalized breath, produces Z, which differs in no wise from the oral action of S.

If the point of the tongue be depressed behind the lower teeth, and its upper surface be presented to the gum or front part of the palate, a hissing sound closely resembling S is produced, which is one of the many modes in which this element is faultily articulated.

If the point of the tongue be laid in *contact* with the teeth, gum, or palate, and the breath escape through lateral apertures, various forms of the defect called Lipping will be the result. In the most common lisp the breath is forced over the sides of the tip of the tongue, between the tongue and the teeth. In a less frequent form of this defect the breath passes over the sides of the middle of the tongue, between the tongue and the back teeth.

When the tip of the tongue is narrowed and presented without contact to the upper gum or front part of the palate, the passage of the breath causes the tongue to quiver or vibrate more or less strongly, and the sound of R is produced. R, as pronounced in England, differs from Z merely in the narrowing and retraction of the point of the tongue. In Scotland, in Spain, and on the Continent generally, R receives a stronger vibration of the whole fore-part of the tongue.

R in English is always a *vocal* element, but it may, of course, be pronounced without voice. The existence of Rh in our orthography would seem to indicate that this voiceless R has been at one time an element in our speech. In Gaelic, Welsh, and many other languages it is still heard. R is so pronounced in French, when final after a Voiceless articulation ; as after t in *theatre*, c in *fiacre*, etc.

R is liable to many faults of articulation, the principal of which are a *labial* seat, instead of, or in connection

with, the lingual formation, giving the effect of w or of w combined with R; and .a *guttural* seat, producing the common defect called *Burring*.

If, from the position R, the point of the tongue be depressed and drawn inwards, so as to remove the seat of articulation *further back* on the tongue and palate, the sound of *Sh* will be produced. This articulation modifying *voice* produces the sound of the letter Z in *azure*, or S in *pleasure*, which, as the *vocal* form of *Sh*, may be conveniently represented by *Zh*. This is the sound of the letter J in French. The English J has the sound of Dzh, as in *Jew*; the voiceless correspondent of this compound (Tsh) is written Ch, as in *chew*.

The change of lingual position from S to Sh is analogous to that from the anterior position of the lips in which the breathing resembles F to the inner and larger aperture of Wh. The breath in Sh and Wh has a semi-whistling sound. A further enlargement of the aperture of either element produces a lingual or labial sonorous *whistle*.

If the back part of the tongue be now raised to the back of the palatal arch, leaving a small central aperture for the breath, the tongue will be in the position for the articulation of Y, as heard without voice in *hue*, *hew*, (=Yhyoo), etc., and, with voice, in *you*, *use*, *cue*, *pew*, *tune*, *duke*, etc. This is almost the position for the vowel ee (No. I). The difference between ee and the articulation Y is exactly the same as that between oo and W, already noticed. The compression of the vocal current through a contracted aperture, and the faint percussive effect on the separation of the organs constituting the articulative quality of Y, while the absence of this pharyngeal effect constitutes the vowel quality of ee.

Y, like W, has its articulative pronunciation only at the beginning of a syllable in English. In other positions, the letter Y is a vowel sign, equivalent to I.

When initial Y is followed by ee, as in *ye, year, yield*, etc., the combination, which is difficult to unpractised organs, illustrates the difference between the articulation and the vowel of similar formation.

The approximation of the root of the tongue to the soft palate at the back of the mouth, gives the last variety of the Second Mode of Articulation. This guttural breathing is not heard in English. It is common in the Scottish dialects, as the sound of ch in *loch*, etc.; and in the German, Spanish, and many other languages.

This articulative position, with vocalized breath, produces an element heard in the Russian, Arabic, and other strongly aspirated languages, and not uncommon in England as the smooth Burr, a cacophonous substitute for R, which bears the same relation to the rough Northumbrian uvular rattle that the smooth English R does to the strongly trilled Continental or Scottish R. The smooth Burr is very common in some parts of France and Germany as the favourite vulgar pronunciation of R.

THIRD MODE OF ARTICULATION.

Central Obstruction and Lateral Emission of the Breath.

This mode of articulation is performed by the lower lip in making F, V; by the point of the tongue in forming Th and L; by the middle of the tongue in the sound of L before ū, as in *lute*; and by the root of the tongue and soft palate in making a peculiar sound of L heard in Gaelic.

The characteristic effect of F is very closely imitated by the sound of the breath passing between both lips,

either through a central aperture, or through contracted lateral apertures. F is correctly formed by applying the middle of the lower lip to the edge of the upper front teeth, leaving merely interstitial apertures for the breath between the sides of the lip and teeth. The same articulative position modifying vocalized breath produces V.

The works already quoted from, which state P to be formed by a "slight compression of the *anterior part* of the lips," make the formation of F to consist in "compression of the *whole lips*, and a forcible breath." Certainly the writer never could have pronounced his own Ps, or fashioned his own Fs, consistently with this theory. Strange that people will not appeal to their own mouths, to test the correctness of descriptions, before copying, thus, the careless and conflicting testimony of books!

The *tip of the tongue* applied to the edge or the inner surface of the *upper teeth*, with *contracted lateral* apertures for the passage of the breath between the tongue and teeth, gives the formation of *th*, as heard (without voice) in *thin*, and (with voice) in *then*.

The *fore-part of the tongue* applied to the palate, with very open apertures over the sides of the tongue, produces L. This articulation is always *vocal* in English, but, in Welsh, the voiceless form of L is a very common element—represented by *ll*. The voice channels of the English L are so open that there is no vibratory effect created by the passage of the breath. The sound is as pure as that of any vowel,† and, but for the *action* necessary to complete

† All the vowel sounds may be produced with the tongue on the palate, as in L. The lateral apertures can be sufficiently modified to form every shade of sound, from *e* to *ah*; and, with the aid of the lips, from *ah* to *oo*; and the intermediate varieties of vowel sound can also be very correctly imitated without removing the point of the tongue from the palate. There is, even, very little peculiarity in the vowels—singly produced—by this mechanism.

the element, it would be classed among the vowels. The fluency with which L combines with other articulations has given it (with *n*, *m*, *ng*) the name of *liquid*.

A form of L with *contracted apertures*, and, consequently, with a rustling sound produced by the passage of the breath between the sides of the tongue and the teeth, is often met with among individual peculiarities, as a substitute for S and Z, to which it bears a very rude resemblance. A similar formation, but with the apertures at the back of the mouth, between the sides of the root of the tongue and the soft palate, occurs in Gaelic. This is a peculiarly difficult articulation to unaccustomed organs.

FOURTH MODE OF ARTICULATION.

Lax Vibration of the Approximated Organs.

Another set of articulations,—if they are worthy of the name,—is produced by so *loosely* approximating the organs that a sufficiently strong current of air causes them to *vibrate* and *flap against each other*.

When *the back of the tongue* and *soft palate* are thus loosely approximated, the relaxed edges of the latter, and especially its narrow prolongation, the *uvula*, are easily thrown into vibration against the tongue, and the Northumbrian *burr* is produced. When the *fore-part of the tongue*,—similarly relaxed,—is laid along the edge of the palatal arch, a smart stroke of the breath will set it in vibration, and the rough R, as heard in Scotland and in most of the continental languages, will result. This sort of articulation may be performed, too, by the *lips*. If they lie loosely together, a strong breath will produce upon them the barbarous effect of a vibration, or flapping, precisely analogous to that of the burr and the rough R. This sound is heard in Scotland in the herd-boy's call to a cow (*pwray*,

leddie;) and it is sometimes used as a rude interjectional utterance of impatience—a form of pooh-poohing—probably by all people.

The absence of this sound from general language, while the two kindred sounds—the trilled R and the uvular Burr—are common, results, no doubt, from the greater difficulty of producing the labial vibration; as the force of the breath is dissipated in the mouth before it reaches the lips.

R is called the canine, or dog's letter; but the name is strictly applicable only to the *burr*, which is precisely the same in mechanism as the *snarl* of a cur. There is not much dignity in this mode of articulation by any organism, though the lengthened R (not the burr) may be expressive enough in some words, as in the "*rude rolling of a rebel drum.*"

The polishers of continental language might do well to imitate the English in their treatment of this cur-related sound, and, as Macbeth did physic, "*throw it to the dogs.*"

CLICKS, OR ARTICULATIVE SUCTIONS.

These sounds have been described (p. 43) as forming a converse series to the ordinary obstructive elements. In the latter, as in all the articulations of civilized languages, the pharynx is distended. In the clicks—which are actual elements of speech in some African dialects—the pharynx is collapsed, and the separation of the oral organs produces an inward percussion of air. These sounds are frequently made by stammerers in their untutored efforts to articulate; and they are also in common interjectional use among all people.

The first of the Clicks is formed on the lips: it is a P

with reversed pharyngeal action. This sound is heard—with a slightly prolonged effect—in the common call to a dog; and it is familiar to everybody as the audible part of the act of kissing.

The second Click is formed on the point of the tongue: it is a T with reversed percussion. This sound, reiterated, is universally known as an interjection of vexation.

The third of the Clicks is formed from the position T, by disengagement of the sides of the tongue, with reversed action of the pharynx: it is the reverse of a T as that letter is articulated before L. This sound is in continual use by drivers as an encouragement to the motion of a horse.

The fourth and last of the Clicks is formed from contact of the whole upper surface of the tongue with the roof of the mouth. The tongue is disengaged by drawing down the root first, the tip last; and, as the point of the tongue leaves the palate, a peculiar flap is heard, such as ventriloquists use in their imitation of the pouring out of liquid from a narrow necked bottle.

The following Table exhibits all the varieties of Articulations in the order in which they have been described :

GENERAL SCHEME OF ARTICULATIONS.

		BREATH.	VOICE.	NASAL.*	
ARTICULATIONS.	OBSTRUCTIVE.	P . .	B	M . .	1st Mode.
		T . . .	D	N . .	
		K	G	Ng . .	
		(Ph) . .	(Bh) (Spanish B)		2d Mode.
		Wh . .	W		
		S . .	Z		
	Central Emission.	(Rh) . .	R (smooth English) . .		
		Sh. . .	Zh		
		Yh	Y		
		Ch (German) .	Gh (Smooth burr) . .		
	CONTINUOUS.	F	V		3d Mode.
		Th(in) . .	Th(en)		
		Ll(Welsh)	L		
		=	L' (before ū) . .		
		=guttural .	L (Gaelic)		
	Lateral Emission.	(κRh) (snarl) .	GR(rough burr) . .		4th Mode.
		R(h)	R(rough trill) . .		
		=lip vibration			
	Lax Vibration.				

* The nasals are placed on the same line with their relative obstruents, to show that their oral mechanism is the same; but M, N, and Ng are in *effect* Continuous elements.

Of these various articulations, twenty-four (twelve actions) are elements of English speech. One, however,—the rough R,—is used only for purposes of effect and imitative expression.

The following Table exhibits the English articulations in the order of their formation; beginning with those that are formed furthest within the mouth, and proceeding outwards to the labial articulations.

ENGLISH ARTICULATIONS.

BREATH.	VOICE.	
	ORAL.	NASAL.
¹ K . . .	² G . . .	³ NG
⁴ Yh(<i>hew</i>)	⁵ Y	=
⁶ Sh	⁷ Zh	=
=	⁸ R (rough) . . .	=
=	⁹ R (smooth) . . .	=
=	¹⁰ L	=
¹¹ T	¹² D	¹⁹ N
¹⁴ S	¹⁵ Z	=
¹⁶ Th(in)	¹⁷ Th(en)	=
¹⁸ F	¹⁹ V	=
²⁰ Wh	²¹ W	=
²² P	²³ B	²⁴ M

We have elsewhere shown (page 5) the defective way in which these twenty-four articulations are represented by our alphabet. The alphabet contains almost a sufficient number of characters; for it has 21 letters to represent.

this class of elements ; but two of these,—namely, C and Q—are altogether redundant ; and two more—namely, J and X—are marks of combinations, and not simple elements ; and so we have, in reality, only seventeen appropriate characters by which to write all our articulations. With what irregularity these letters are used in the notation of our language will be seen in a subsequent chapter.

ELEMENTARY INSTRUCTION IN SPEECH.

[T really seems strange that *speech*—a power so common and so invaluable, a thing “in everybody’s mouth,” should not have been taught to us elementarily ; and in looking back over the preceding pages, very strange it certainly appears, that there should be such a phenomenon in cultivated society as a person incapable of sounding an S, an L, an R, or any of the simple elements correctly ; yet we have even public teachers—in almost every department of knowledge—exhibiting in their utterance such shameful incapacities, in great variety, and vitiating by their high example the taste and habits of extensive circles ; so that it is really thought no disgrace to be a burrer, a lisper, a mumblor, a drawler—to twang words in the nose, to scream, and roar, to foam, to squeak, to whine, to mouth, and otherwise so to abuse the glorious faculty of speech, that with Shakspeare, we may say, it seems as if “some of Nature’s journeymen had made men, and not made them well—they imitate humanity so abominably.”

The reason of the general ignorance of speech, from which such a state of things results, is, we are told, just the very commonness of the faculty, which seems to render

the subject below scientific inquiry. But *is* it therefore unworthy of being understood? Why, then, were not scientific men satisfied with *seeing* and *hearing* on the same ground? Why did they seek to know *how* we see and hear? They have elaborated theories of optics—and look at the result? Wonderful mechanical adaptations of optical principles, before undreamt of, and which, otherwise, would never have been discovered. Might not an analogous result attend the philosophical investigation of the faculty of speech; and acoustic and articulative principles be developed, which would lead to mechanical inventions no less wonderful and useful than those in optics? A subject so little explored, and so open to operations, is, at least, full of *promise* to science.

In the ordinary mode of teaching children to read, the difficulties, necessarily attending our defective orthography, are fully laid in the learner's way, so as to make his task one of as much drudgery as possible. What is called *elementary* instruction is not such,—our children have no really elementary instruction *in speech*. They are taught the alphabet, such as it is; but they are not taught an alphabet of *sounds*. They are taught to *name* the letters; that is to say, they are taught to associate with the characters a set of *words*, by which they may in time become qualified to speak *of* the letters; but they are not taught those simple elementary sounds by which they might at once be enabled to *speak* the letters; so that the child has not the most distant idea of the real object of the characters he becomes familiar with. It never can enter into his mind that they stand for no more in speech than those puffs, and blows, and hisses, and other funny noises, which the youngest in the school could make perfectly, and would make with most delightful interest;

this is all darkness to him:—and if, by some accidental coincidence between the name and power of a letter, a ray of light flash upon him, and he seek to trace it to the truth which shot it forth, he soon gives us the search in despair; the light disappears at the first step from the chink which let it in—and he can see no way out of the *double-you, eye, ell, de, e, are, en, e, double-ess* (wilderness) by which he finds himself surrounded.

The first sad period of his education at last over—he “knows his letters.” Unfortunately, however, he discovers that he is then hardly in the least advanced in the art of reading, but has a new task to learn, and a new vexation, in every new combination of letters. One thing, however, is done, beyond the mastery of the alphabetic names; he has learned to *learn* without *understanding*, to *know* without knowing *what*;—and he is therefore prepared to apply what he knows in any way he may be told, without inquiring or caring to learn the *how* and *why*. A foundation is laid for a mindless after-course. The school he either dislikes, or loves only for its opportunities of social mischief; till in due course he “finishes his education,” and leaves the school—with a certain amount of knowledge acquired by *dint* of preceptorial authority, but without having learned the preëminently important lesson—to teach himself—to love knowledge for its own sake—to have a “constant care to increase his store”—and to go on a scholar to the end of his days.

Fraught with consequences momentous as these, is, we believe, the false initiatory training of the alphabetic class.

An improved orthography would, no doubt, be a ready means of amending this state of matters,—and a very excellent system of phonetic orthography, that needed

but little to make it perfect, was introduced some years ago as an experiment; but it is to be feared that existing prejudices will be found too strong to admit of sufficient reformation in this way. Nor is such a mode of improvement indispensable. A better use may be made of present materials.

The rational mode of teaching to read would surely be to begin with the *mouth*, and teach it to *speak*; to present, first, to the imitative aptitude of children the simple elementary *sounds* of language, and get these practically mastered, before endeavouring to teach the eye to recognize their arbitrary symbols. The *sounds* should be the first object of the teacher; and their practice will be an amusement—not a task—to the child; while, in learning them, he may be led on, almost insensibly, to a knowledge of the alphabetic symbols, and so by a most agreeable method, and in a very short time, gain all, and much more than all, that is now gained after laborious and protracted effort on the part both of teacher and pupil.

Distinct and graceful habits of speech, too, would thus be formed; the mouth would be in advance of the eye: and there would be an end to those abortive mouthings, and to that hesitancy and stammering which, in a greater or less degree, are common to all educational tyros now, and which sometimes strike root into the muscular and nervous systems, and produce most pitiable objects in society.

A glance at the pages of English writers of past and present times will show that innovations in orthography are not to be dreaded as *novelties* without precedent, and of doubtful consequence. Our language has been, in this respect, in a state of constant change; modes of spelling, and modes of pronunciation, have had their seasons of

fashion and of desuetude ; and people have got on without perplexity amid these fluctuations, and have as readily adopted the novelties, and antiquated their antecedents, as they have changed the fashion of their garments. *Now*, there is less liability to change, and it is more difficult to effect alterations, on account of the numerous dictionaries which have given something like a standard to orthography. But even in these there have been changes, and every new lexicon registers some alterations. There is, therefore, no ground for a spirit of etymological conservatism, opposing improvements as destructive to long-instituted and time-honoured modes of spelling. Changes will take place, and the more the subject of speech is studied, the more rapid and easy will transitions become, till letters present, as they might and should, a picture of sounds almost as simple as the sounds themselves.

An orthographic reformation is commonly deprecated by the educated, though none can deny that it would afford the readiest means of giving the blessings of education to the illiterate. The various objections urged against a change are all of them selfish considerations. They possess no weight in comparison with the great advantages which would result from the adoption of a mode of spelling correspondent to our actual utterance.*

An ill-represented language is a hindrance to foreign communication ; and this must lead to reformations, as international intercourse increases. The inconveniences

*Any change that may be attempted, however, should be accurately phonetic. Some orthographic reformers need to be reminded of this. With the view of discarding "redundant" letters, Mr. Webster has introduced in his Dictionary such spellings as honor, labor, etc., instead of honour, labour, etc. This is a change in the wrong direction, for the discarded letter happens to be the one that is pronounced, and the redundant letter the one that is retained. Besides the termination *or* in English indicates a *person*, as in sailor, orator, minor, etc., and *our*, a *quality*. This distinction, which is certainly encumbered with numerous exceptions, would be altogether lost, were the proposed change admitted.

of English orthography are peculiarly great. The language itself is difficult enough to foreigners; but its irregular orthography renders its correct use almost unattainable to those who are not

“Native here, and to the manner born.”

The object of the present work is not, however, to attempt a change in orthographic practice. We believe that a better acquaintance with the elementary simplicity of speech will in time work all necessary changes; and we therefore leave speculative reformatory, and confine ourselves to practical improvements in the use of present materials. We have endeavored to frame from actual observation a complete scheme of the elements of speech—to show the true powers of our letters, and so to remedy in some degree those inconveniences which result from ignorance superadded to the systematic absurdities which confessedly characterize our language, as it vainly struggles to preserve an etymological shadow in the Writing, when the substance has no longer an existence in the Speech.

In a little Nursery Book of “Letters and Sounds,”* the “better use that may be made of present materials” is practically exhibited. A strictly phonetic method of teaching reading is shown to be possible, without any interference with orthography. The eye of the learner is gradually familiarized with anomalous modes of spelling, while these have no retarding influence on his progress; and the confusion attendant on a change from phonetic to literary orthography is altogether obviated. Experiments have proved that the system of teaching Letters through

*Bell’s “Letters and Sounds.” Price 1s., London; Hamilton, Adams & Co.; Edinburgh: W. P. Kennedy. [This Work is out of print.]

the medium of Sounds reduces by one-half the time and labour of teaching and of learning to read ; while it may safely be affirmed that, under such a system of elementary instruction in Articulation, defects and impediments of speech would be almost unknown.†

†EXPLANATION OF THE PLAN OF THE BOOK.

I. One letter is taught at a time, and the *Sounds* of the letters are illustrated to the eye by suggestive *pictures*, a single glance at which elicits the sound from the child and recalls it to his mind without any effort of memory. Thus, the picture of a man smoking a pipe stands side by side with the letter *p*, and the imitation of the *puff* in smoking produces the sound of the letter. In this way the elements of language are taught one by one, and the complete alphabet occurs nearer the end than the beginning of the book.

II. Words containing all the letters learned are collected in each section—separately, and combined in little sentences, as Reading Exercises,—so that the child reads from the very first lesson. Thus, when the primary sounds of the letters *A*, *O*, and *S* are learned—which is after a mere glance at the illustrative pictures—the child immediately reads their combinations in the words “say, so,” etc.; and thereby feels the delight which only a child can feel, at being able to read in a single lesson ! The first steps thus made easy, the learner is encouraged to proceed with interest.

III. In *two* sections (which will be mastered in as many lessons) the sounds of *six* letters are acquired, and such words as “aim, same, may, mow, maim, pope, soap, pipe, sigh,” etc., are added to the vocabulary of legible words. In *three* sections, *eight* letters and sounds have been learned, and such words as “shame, shape, home, hope,” etc., occur in the reading exercises. Another section adds two new elements to the stock of knowledge, and gives the power of reading such words as “sight, might, state, haste, potato, kite, oak,” etc.

IV. This could not possibly be done if the names of the letters were taught as the elements of a word, or if silent letters were taught at all either by names or sounds ; but it is done without the slightest difficulty ; and *without any alteration of spelling*, by printing silent letters subordinately, and presenting to the eye in LARGE TYPE THE LETTERS WHICH ARE ACTUALLY SOUNDED. Thus :—

sa^y, si^{gh}, so^ap, mo^w, mai^m, etc.

To the large letters alone attention is directed, while the servile or silent letters are all printed in their proper places, but *in a smaller character*, which does not interfere with the reading of the letters that are pronounced.

V. The presence of silent letters thus gives no trouble to the learner in reading, while, at the same time, his eye is accustomed to see them in familiar words. The memory for spelling lies altogether in the eye ; and this distinctive printing of silent letters gives prominence to the peculiarities of orthography, and *impresses them on the memory without any direct effort of learning*.

VI. All irregularities are kept out of sight until facility in vocalizing known letters, and in reading their regular combinations, is acquired. The principles of reading are, by the method employed, so comprehensive that the number of irregularities is extremely small. By the association of LETTERS *with* SOUNDS they are reduced to limits, the narrowness of which will astonish those who have long lamented over their apparently hopeless complexity, when Sounds have been taught through the medium of Letters.

THE POWERS OF THE LETTERS AND ORTHOGRAPHIC TABLES.

THE orderless condition of English orthography is susceptible of many curious illustrations. The test of a correct representation of sounds would be that all letters, in whatever arrangement, and however transposed, should retain their fixed individual sounds; as in the case of the word *end*, the letters of which may be transposed into *ned* or *den*, while each retains its power unaltered.

As a man's character is best known by the company he keeps, so our alphabetic "characters" are only to be sounded with certainty when we know the literal society in which they are found.

Thus, transpose the vowels in *chase*, and, not unnaturally, the chase results in *aches*. The largest *moat* may be literally proved to be but an *atom*.—By mere disjunction of letters that which was *nowhere* is *now here*.—*Wo* to him who shall take a *t* from *two*, even as to him who shall dare to separate *man* from *woman*.—Though you remove the *t* from *there*, yet *here* it remains.—Put *c* before *hanged*—and lo! how it is *changed*!—Of all the letters in the alphabet *e is of the most use to us*;—though *b* and *y* certainly make *us busy*.—You cannot join *f* to *of*, but it will instantly be *off*.—*S* may well be called a "sharp" letter, when it can convert a *word* into a *sword*.—Though you take the first and last letters from *know* yet it is *now*, *no*,—"Dust we are," and even the *heart* resolves itself into *earth*.—We can take *c* from *cease* with *ease*; but *w* cannot be removed from

wart without *art* ; and he who would take *v* from *vague* will have an *ague*.—Take *g* from *gown*—it loses nothing of its *own* ; add *g* to *one*, and lo ! it is *gone*.—Prefix *e* to *we*, it becomes *eve* ; unite *thy* and *me*, they produce *thyme*. Add one *f* to *our*—the product is *four*.—Take off the *w* from *won*—it remains *on* ; put it before *hat*—it is *what* ? try it before *here*—it is *where* ?—The three letters in *own* may be arranged into *won* ; repeat the transposition, and own them *now*, not *won*. *R* transforms a *cow* into a *crow*, and lengthens *eve* into *ever*. *E* changes the pronoun *ye* into an *eye*, and the preposition *to* into a *toe*, and makes *on* also become *one*. Take *s* from *shoes* they becomes *hoses* ; if you ask *how*, *s* will promptly *show* it. *Y* makes what is *ours* become *yours*. Write an *f* and you will have *fever* for *ever* !

Such examples might be increased to any extent, but these are sufficient to show how little of rule there can be, founded on letters, to guide the foreigner or the youthful learner to the correct utterance of our written words. The following Tables show, in separate arrangements, the *sounds* of our *Vocal* and *Articulation marks*, and the *marks* of our *vowel* and *articulate Sounds*.

ORTHOGRAPHIC TABLES.

SOUNDS OF THE VOWEL MARKS.

The figures refer to the English Vowel Scheme, page 30. Y and W among the figures are articulations.

A sounds	{	2	as in orange
		3	" ale
		4	" care, any
		5	" add
		6	" path
		7	" arm
		10	" all, swan

E "	{	1	as in eve
		2	" England
		4	" ere, ever
		7	" clerk
		8	" err
		y	" righteous

I "	{	1	as in pique
		2	" ill
		7.1	" isle
		8	" bird
		y	" million

O "	{	2	as in women
		7.13	" accopt
		9	" word, son
		10	" orb, on
		11	" ore
		12	" ode
		13	" do, wolf

U sounds	{	2	as in busy
		4	" bury
		9	" burn, bud
		13	" rule, bull
		y 13	" use
		w	" persuade

Y "	{	2	as in hymn
		7.1	" by
		8	" myrrh
		y	" ye

AA "	{	4	as in Aaron
		5	" Isaac

Æ "	{	1	as in Cæsar
-----	---	---	-------------

AE "	{	1	as in aerie
		3 1	" aerial
		3.4	" Israel
		4	" aer, Michael- [mas.

Al "	{	2	as in captain
		3	" ail
		3.2	" dais
		4	" air, said
		5	" plaid
		7.1	" aisle

AO sound	$\left\{ \begin{array}{l} 3 \text{ as in gaol} \\ 3.10 \text{ " chaos} \\ 3.12 \text{ " aonian} \\ 10 \text{ " extraordi-} \\ \quad \quad \quad \text{[nary]} \\ 12 \text{ " Pharoah} \end{array} \right.$	EO sound	$\left\{ \begin{array}{l} 1 \text{ as in people} \\ 1.10 \text{ " theology} \\ 1.12 \text{ " creole} \\ 4 \text{ " leopard} \\ 9 \text{ " dungeon} \\ 10 \text{ " George} \\ y13 \text{ " feod (fyood)} \end{array} \right.$
AU "	$\left\{ \begin{array}{l} 3 \text{ as in gauge} \\ 7 \text{ " aunt} \\ 10 \text{ " aught, laurel} \\ 12 \text{ " hauteur} \end{array} \right.$	EU "	$\left\{ \begin{array}{l} 4 \text{ L.I as in amateur} \\ 13 \text{ " rheum} \\ y13 \text{ " feud} \end{array} \right.$
AW "	$\left\{ \begin{array}{l} 10 \text{ as in awful} \\ 6w \text{ " away} \end{array} \right.$	EW "	$\left\{ \begin{array}{l} 12 \text{ as in shew} \\ 13 \text{ " grew} \\ y13 \text{ " dew} \end{array} \right.$
AY "	$\left\{ \begin{array}{l} 2 \text{ as in Monday} \\ 3 \text{ " lay} \\ 4 \text{ " prayer, says} \\ 7.1 \text{ " ay} \end{array} \right.$	EY "	$\left\{ \begin{array}{l} 1 \text{ as in key} \\ 2 \text{ " monkey} \\ 3 \text{ " prey} \\ 4 \text{ " eyre} \\ 7.1 \text{ " eying} \end{array} \right.$
AOU "	{ 7.13 as in caoutchouc		
AWE "	{ 10 as in awe		
AYE "	$\left\{ \begin{array}{l} 3 \text{ as in aye} \\ 3.2 \text{ " gayety} \\ 3.4 \text{ " gayest} \end{array} \right.$	EAU "	$\left\{ \begin{array}{l} 12 \text{ as in beau} \\ y13 \text{ " beauty} \end{array} \right.$
		EOI "	{ 10.1 as in bourgeois
EA "	$\left\{ \begin{array}{l} 1 \text{ as in each} \\ 1.3 \text{ " create} \\ 1.5 \text{ " react} \\ 1.6 \text{ " area} \\ 2 \text{ " guineas} \\ 3 \text{ " great} \\ 4 \text{ " wear, health} \\ 7 \text{ " heart} \\ 8 \text{ " earl} \end{array} \right.$	EWE "	$\left\{ \begin{array}{l} 12 \text{ as in sewed} \\ 13 \text{ " brewed} \\ y13 \text{ " ewe} \end{array} \right.$
EE "	$\left\{ \begin{array}{l} 1 \text{ as in bee} \\ 1.4 \text{ " re-enter} \\ 2 \text{ " breeches} \end{array} \right.$	EYE "	$\left\{ \begin{array}{l} 1 \text{ as in keyed} \\ 3 \text{ " surveyed} \\ 7.1 \text{ " eyed} \end{array} \right.$
E'E "	$\left\{ \begin{array}{l} 1 \text{ as in ee'n} \\ 4 \text{ " ne'er} \end{array} \right.$	IA "	$\left\{ \begin{array}{l} 2 \text{ as in parliament} \\ 1.3 \text{ " mediate} \\ 1.5 \text{ " trivial} \\ 7.1.3 \text{ " hiatus} \\ 7.1.5 \text{ " Iambic} \end{array} \right.$
EI "	$\left\{ \begin{array}{l} 1 \text{ as in ceil} \\ 1.2 \text{ " reimburse} \\ 2 \text{ " forfeit} \\ 3 \text{ " veil} \\ 4 \text{ " heir, heifer} \\ 7.1 \text{ " height} \end{array} \right.$	IE "	$\left\{ \begin{array}{l} 1 \text{ as in field} \\ 1.1 \text{ " series} \\ 1.4 \text{ " veriest} \\ 1.8 \text{ " earlier} \\ 2 \text{ " sieve} \\ 4 \text{ " friend} \\ 7.1 \text{ " die} \\ 7.1.4 \text{ " science} \end{array} \right.$

IO sound	$\left\{ \begin{array}{l} 9 \text{ as in motion} \\ 1.10 \text{ " mediocrity} \\ 1.12 \text{ " mediocre} \\ 7.1.10 \text{ " Ionic} \\ 7.1.12 \text{ " violence} \end{array} \right.$	UA sound	$\left\{ \begin{array}{l} w3 \text{ as in persuade} \\ 5 \text{ " piquant} \\ w5 \text{ " quack} \\ 7 \text{ " guard} \\ 13.7 \text{ " guano} \\ w10 \text{ " squall, squat} \end{array} \right.$
OA "	$\left\{ \begin{array}{l} 9 \text{ as in cupboard} \\ 10 \text{ " broad, groat} \\ 11 \text{ " oar} \\ 12 \text{ " boat} \\ 12.5 \text{ " coagulate} \\ 12.6 \text{ " oasis} \\ 12.7 \text{ " coarct} \end{array} \right.$	UE "	$\left\{ \begin{array}{l} w1 \text{ as in query} \\ 4 \text{ " guess} \\ w4 \text{ " quell} \\ 8 \text{ " guerdon} \\ w8 \text{ " cuerpo} \\ 13 \text{ " rue} \\ 13.4 \text{ " cruel} \\ y13 \text{ " cue} \\ y13.4 \text{ " duel} \end{array} \right.$
OE "	$\left\{ \begin{array}{l} 10.1 \text{ as in oboe} \\ 12 \text{ " doe} \\ 12.1 \text{ " coeval} \\ 12.2 \text{ " poet} \\ 13 \text{ " shoe} \end{array} \right.$		
OI "	$\left\{ \begin{array}{l} 3 \text{ as in connoisseur} \\ 9 \text{ " avoirdupoise} \\ 10.1 \text{ " coin} \\ 12.2 \text{ " stoic} \\ 13.2 \text{ " doing} \\ w7.1 \text{ " choir} \\ w10 \text{ " memoir} \end{array} \right.$	UI "	$\left\{ \begin{array}{l} 1 \text{ as in mosquito} \\ w1 \text{ " suite} \\ 2 \text{ " build} \\ w2 \text{ " quill} \\ 7.1 \text{ " guide} \\ w7.1 \text{ " quire} \\ w8 \text{ " squirt} \\ 13 \text{ " fruit} \\ 13.2 \text{ " fruition} \\ y13 \text{ " suit} \\ y13.2 \text{ " aguish} \end{array} \right.$
OO "	$\left\{ \begin{array}{l} 9 \text{ as in blood} \\ 11 \text{ " door} \\ 12 \text{ " brooch} \\ 12.10 \text{ " zo-o-logy} \\ 12.12 \text{ " zo-o-logical} \\ 13 \text{ " bloom, book} \end{array} \right.$	UO "	$\left\{ \begin{array}{l} 10 \text{ as in liquor} \\ w10 \text{ " quondam} \\ w11 \text{ " quorum} \\ w12 \text{ " quote} \\ y13.12 \text{ " duo} \end{array} \right.$
OU "	$\left\{ \begin{array}{l} 9 \text{ as in journal, young} \\ 10 \text{ " bought, cough} \\ 11 \text{ " four} \\ 12 \text{ " soul} \\ 13 \text{ " through, would} \end{array} \right.$	UY "	$\left\{ \begin{array}{l} 2 \text{ as in plaguy} \\ w2 \text{ " colloquy} \\ 7.1 \text{ " buy} \end{array} \right.$
		WE "	$\left\{ \begin{array}{l} 8 \text{ as in answer} \end{array} \right.$
OW "	$\left\{ \begin{array}{l} 7.13 \text{ as in now} \\ 9 \text{ " bellows} \\ 10 \text{ " knowledge} \\ 12 \text{ " know} \end{array} \right.$	WO "	$\left\{ \begin{array}{l} 9 \text{ as in twopence} \\ 11 \text{ " sword} \\ 13 \text{ " two} \end{array} \right.$
OY "	$\left\{ \begin{array}{l} 10.1 \text{ as in boy} \end{array} \right.$	YE "	$\left\{ \begin{array}{l} 7.1 \text{ as in dye} \\ 7.1.1 \text{ " hyena} \\ 7.1.8 \text{ " dyer} \end{array} \right.$

IÆ sound { y.1 as in minutæ	UAY sound { 1 as in quay
IEU " { 4v " lieutenant { y13 " adieu	UEA " { w1 " squeak
IEW " { y13 " view	UEE " { w1 " queen
IOU " { 9 " cautious	UEU " { 4 L / " liqueur
CEU " { 13 " manoeuvre	UOI " { 1 " torquoise { w10.1 " quoit
OOE " { 13 " wooded	UOY " { w10.1 " buoy
OWE " { 7.13.4 " vowel { 12 " owed { 12.4 " lowest	IEWE " { y13 " viewed
OWA " { 11 " towards	UAYE " { 1 " quayed
	UEUE " { y13 " queue
	UOYE " { w10.1 " buoyed

SILENT VOWEL MARKS.

E	is silent in	hidden, fasten, soften etc., and generally when final.
I	"	devil, etc.
O	"	mutton, prison, etc.
AI	"	Britain.
UA	"	victuals.
UE	"	plague, barque, harangue, etc.

MARKS OF THE VOWEL SOUNDS.

Vowel 1 is represented by	{	e	as in	eve
		i	"	fatigue
		æ	"	minutiaæ
		æ	"	aerie
		ee	"	bee
		e'e	"	e'en
		ea	"	eat
		ei	"	conceive
		eo	"	people
		ey	"	key
		eye	"	keyed
		ie	"	field
uoi	"	turquoise		

Vowel 2 is represented by	{	a	as in	cabbage
		e	"	pretty
		i	"	ill
		o	"	women
		u	"	busy
		y	"	hymn
		ai	"	mountain
		ay	"	Monday
		ea	"	guineas
		ee	"	breeches
		ei	"	forfeit
		ey	"	monkey
		ia	"	parliament
		ie	"	sieve
	ui	"	build	
	uy	"	plaguy	

Vowel 3 is rep. by	a	as in	age
	ai	"	aim
	ao	"	gaol
	au	"	gauge
	ay	"	pay
	aye	"	aye
	ea	"	steak
	ei	"	vein
	ey	"	obey
	eye	"	preyed
Vowel 4 is represented by	oi	"	connoisseur
	a	as in	fare, many
	e	"	ere, ever
	u	"	bury
	aa	"	Aaron
	ae	"	aer, Michaelmas
	ai	"	air, said
	ay	"	prayer, says
	ea	"	wear, health
	e'e	"	ne'er
5 by	ei	"	heir, heifer
	eo	"	leopard
	ey	"	eyre
	ie	"	friend
	ue	"	guess
	a	as in	amber
	aa	"	Canaan
	ai	"	raillery
	a	as in	ask
	a	as in	ask
Vowel 7 by	a	as in	ardour
	e	"	clerk
	au	"	haunt
	ea	"	heartly
	ua	"	guardian
Vowel 8 by	e(r)	as in	her
	i(r)	"	firmness
	y(r)	"	hyrst
	ea(r)	"	earnest
	ue(r)	"	guerdon
	we(r)	"	answer

Vowel 9 is rep. by	o	as in	world, done
	u	"	furnace, ugly
	eo	"	dungeon
	io	"	motion
	oa	"	cupboard
	oi	"	avoirdupoise
	oo	"	blood
	ou	"	journey, young
	ow	"	bellows
	wo	"	twopence
Vowel 10 by	iou	"	cautions
	olo	"	colonel
	a	as in	fall, want
	o	"	order, often
	ao	"	extraordinary
	au	"	taught, laudanum
	aw	"	awful
	awe	"	awe
	eo	"	George
	oa	"	abroad, groat
Vowel 11 by	ou	"	thought, hough
	ow	"	knowledge
	o	as in	ore
	ew	"	sewer
	oa	"	oar
	oo	"	door
	ou	"	four
	wo	"	sword
	owa	"	towards
	orps	"	corps
Vowel 12 is rep. by	o	as in	old
	ao	"	Pharaoh
	au	"	hauteur
	ew	"	shew
	eau	"	beau
	ewe	"	sewed
	oa	"	oak
	oe	"	foe
	oo	"	brooch
	ou	"	soul
	ow	"	crow
	owe	"	crowed

Vowel 13 is rep. by	{	o	as in do, wolf
		u	" rule, pull
		eu	" rheumatism
		ew	" grew
		ewe	" brewed
		oe	" shoe
		œu	" manœuvre
		oo	" bloom, book
		ooe	" wooed
		ou	" through, would
		ue	" rue
		ui	" fruit
		wo	" two

Vowel 7-13 by	{	o	as in accomptant
		ou	" thou
		ow	" bow

Vowel 7-1 is rep. by	{	i	as in isle
		y	" by
		ai	" naïveté
		ay	" ay
		ei	" height
		ey	" eying
		eye	" eye
		ie	" lie
		ui	" guide
		uy	" buy
		ye	" dye

Vowel 10-1 by	{	oe	as in oboe
		oi	" coin
		oy	" boy
		eo	" burgeois

SOUNDS OF THE ARTICULATION MARKS.

B sounds as in babe	
C	" cell, cake, vermicelli,
	special
	sacrifice (verb)
D	" deed, stopped, soldier
F	" feoff, of
G	" gig, gem, rouge
H	" he, hay, high, hoe, hue, etc. (the vowel <i>for-mation</i> modifying un-vocalized breath)
	eighth
J	" jay, hallelujah, jambeaux
K	" kick
L	" lull, colonel
M	" maim
N	" noon, an-ger, Banff
P	" pop
Q	" queen
R	" rare

S sounds as in this, as, sugar,	
	lesion
T	" tight, action, transition
V	" vivid
W	" wag (this letter is also a vowel mark)
X	" expect, exists, xystus
Y	" yard (this letter is also a vowel mark)
Z	" zeal, azure
bb	" clubbist, club-book
bd	" bdellium, obdurate
bt	" debt, subtend
cc	" tobacco, accede
cch	" Bacchus
ch	" chapter, character, chaise
	sandwich
chm	" drachm, drachma
chs	" fuchsia, stomachs

cht	sound as in yacht ^t	mb	sound as in dumb, rhumb ^{m mb}
ck	" back ^k	mm	" hammer ^m
ckb	" Cockburn, cock-boat ^{b kb}	mn	" hymn, mnemonics, ^{m n}
ckg	" blackguard ^g		amnesty ^{mn}
cq	" acquire ^k	mp	" Campbell, compt ^m er, lamp ^{n mp}
ct	" indict, diction, active ^{t kesh kt}	nd	" handkerchief, hand ^{ng nd}
cz	" Czar ^z	ng	" sing, single, ingraft, ^{ngg n-g ndzh}
dd	" haddock, head-dress ^{d d d}		fringes ^{ndzh}
dhh	" Buddhist ^d	nn	" minnow, meanness ^{n nn}
dg	" judgment, Edgar- ^{dzh dg dn}	pb	" cupboard, cupbearer ^{b pb}
dn	" Wednesday, madness ^{n dn}	ph	" nephew, philter, diph- ^{v f p}
ds	" Windsor, winds ^{z dz}		thong, loophole ^{p-h}
ff	" ruffle, half-fee ^{f f ft}	phth	" phthisical, apophthegm, ^{t th pth}
ft	" soften, softer ^{f ft}		triphthong ^{pth}
gh	" hiccough, hough, ghost, ^{p k g}	pn	" pneumatics, cheapness ^{n pn}
	laugh ^{f t}	pp	" supple, soup-pan ^{p p p}
ght	" bought ^t	pph	" sapphire ^f
gl	" seraglio, ugly ^{l gl}	ps	" psalm, perhaps ^{s ps}
gm	" phlegm, phlegmatic ^{m gm}	psh	" pshaw, upshot ^{sh psh}
gn	" gnomon, signet ^{n gu}	pt	" receipt, apt ^{t pt}
hn	" John ⁿ	qu	" quake, quay ^{kw k}
kn	" know ⁿ	rh	" rhetoric, perhaps ^{r rh}
ld	" would, Guildford, builder ^{d l ld}	rr	" error, poor-rates ^{r r r}
lf	" half, self ^{f lf}	rrh	" catarrh ^r
lfp	" halfpenny ^p	rs	" person, Persian, bars ^{rs rsh rz}
lk	" walk, elk ^{k lk}	rt	" mortgage, heart ^{r rt}
ll	" falling, soulless ^{l ll}	sc	" viscount, science, discern, ^{k s z}
lm	" psalm, elm ^{m lm}		conscience, sceptic ^{sh sk}
ln	" kiln, fulness ^{l ln}	sch	" schism, schedule, ^{s sh}
lx	" calx ^{lks}		mischief, school ^{stsb sk}

sh	sound as in ^{sh} shape, ^z dishonour,	th	sound as in ^t thigh, ^{t-h} thy, ^{tth} pothouse
	^{s-h} mishap		^t thyme, ^{tth} eighth
sl	“ ^l isle, ^{sl} asleep	tl	“ ^l bristly, ^{tl} ghastly
sn	“ ⁿ puisse (^{pr.} puny), ^{sn} snare	tt	“ ^t hatter, ^{t t} boot-tree
ss	“ ^s loss, ^{s-s} mis-sent, ^z scissors,	tth	“ th Matthew
	^{sh} mission, ^{zh} abscission	tw	“ ^t two, ^{tw} twain
st	“ ^s castle, st history	tzs	“ ^s britzska
str	“ ^s mistress (colloquial),	wh	“ ^h what, who
	^{str} stress	wl	“ ^l knowledge
sv	“ ^v Grosvenor	wr	“ ^r write
sw	“ ^s sword, ^{sw} sward, ^{zw} Boswell,	ws	“ ^s bellows, ^z bellows (verb)
	^z Chiswick	zv	“ ^v rendezvous
tb	“ ^h hautboy, ^{tb} potboy	zz	“ ^z buzzing, ^{tz} mezzotint

SILENT ARTICULATION MARKS.

DOUBLE LETTERS are generally sounded as one; as in *cannon*, *better*, *missile*, *pepper*, *hammer*, *beckon*, *acquire*, etc. One, therefore, in such pairs is silent.

B is silent in *bdellium*, *dumb*, *debt*, etc.

C “ *science*, *Czar*, *muscle*, *black*, *acquiesce*, *indict*, *schedule*, etc.

D “ *Wednesday*, *handkerchief*, etc.

F “ *halfpenny*.

G “ *bagnio*, *seraglio*, *phlegm*, etc.

H “ *heir*, *thyme*, *rheum*, *khan*, *John*, *ghastly*, *diphthong*, *character*, etc.

K “ *know*, *wreck*, etc.

L “ *alms*, *salmon*, *would*, *half*, etc.

M “ *mnemonics*, etc.

N “ *hymn*, *kiln*, etc.

P “ *cupboard*, *ptarmigan*, *pneumatics*, *psalm*, *bumpkin*, *assumption*, *pshaw*, etc.

S “ *demesne*, *isle*, *viscount*, *chamois*, etc.

T “ *fasten*, *soften*, *trait*, *mortgage*, *hautboy*, *Matthew*, etc.

W “ *whole*, *who*, *sword*, *two*, *write*, *knowledge*; and when final.

Y “ when final after a vowel.

Z “ *rendezvous*.

Ch “ *drachm*, *yacht*, *bacchanal*, *schism*, etc.

Ck “ *blackguard*.

Dh “ *buddhist*.

ARTICU-
LATION.

23 is represented by b, be, bb, pb; as in crab, glebe, ebb, cupboard.
24 is represented by m, mb, me, mm, mn, chm, gm, lm, sme; as in aim, lamb, same, common, condemn, drachm, paradigm, palm, disme.

To these may be added the common combinations *ks-gz*, alphabetically represented by *x*; and *tsh-dzh*, the latter alphabetically represented by *j*; the former being commonly denoted by *ch*.

1-14 are represented by x, xc, xe, cc, chs, ks, cks, ques; as in ox, except, axe, accept, stomachs, works, wrecks, barques.
2-15 " x, gs, ggs; as in exalt, legs, eggs.
11-6 " c, ch, tch; as in vermicelli, chair, watch.
12-7 " d, dg, dge, g, ge, gg, j, ch; as in soldier, judgment, judge, gem, range, exaggerate, jay, sandwich.

PHONETIC NOTATION OF SPEECH.*

IT would really be a matter of but little difficulty to reconstruct our alphabet, and furnish it with invariable marks for every appreciable variety of vocal and articulate sound. So few as 12 radical letters might be made to represent all the English articulations. Thus: we have 12 forms of articulative action, most of which do, and all of which may, modify both *voice* and *breath*; so producing 24 elements of speech. Let some uniform change to represent *breath* and *voice* be made on each of the 12 characters, and these 24 varieties of articulate sound may be not only fully represented, but with a natural analogy and consistency, which would explain to the eye their organic relations.

A further uniform change made on those letters which have a *nasal correspondent* would complete the scheme, and, with perfect analogy between marks and sounds, exhibit, by 12 radical letters, every articulation in our language.

*This chapter foreshadows the idea which was subsequently materialized in "Visible Speech."

Some equally simple and analogical notation might be arranged for the vowels, on the principle of their sequence, so that a really Scientific Alphabet could be easily constructed.

The system of Phonotypes—or letters representing sounds—introduced by Messrs. Pitman and Ellis, though a great improvement on the ordinary alphabet, does not carry improvement beyond supplying deficient letters, and discarding redundant ones. If ever a change in our orthography should be authoritatively made, it should be based on an alphabet as perfect *a picture of our sounds* as science and ingenuity could produce. We have shown *a principle* by means of which the formation of such an alphabet would be an easy matter.

Mr. Pitman's phonographic scheme of marks is much more scientific than the alphabet of phonotypes; but even the former is,—for the purpose of *accurate notation*,—far short of what a more intimate knowledge of the vocal mechanisms should have made it. In a system of writing by sound, there must be a very accurate appreciation of sound, and a faultless principiation of language. In both these respects, this phonographic system is somewhat defective.

FIRST. The vowel notation, for instance, represents the sounds in the following pairs of words as the same in quality, and different only in quantity; the vowels in the first line being called “long,” and those in the second “short.”

“*seek, pate, psalm, stalk, cote, fool,*
sick, pet, Sam, stock, cut, pull.”

True *phonography* cannot recognize such “longs” and “shorts.”

SECOND. A phonographic writer should be able to delineate on his page the very peculiarities of a speaker's pronunciation ; but in this system no means are furnished for the writing of four of the most distinctive of all the vowel sounds in English : those heard in the words

ere, err, ask, ore.

THIRD. The articulations, also, are arranged on false principles. They are classed as "*mutés*," which include such letters as B and J ; "*semi-vowels*," which include such as F and S ; "*liquids*," which include only R and L : and the letters M, N, and NG, which are also liquids, are classed as simply "*nasals*."

FOURTH. Voice Articulations are called "*flats*," and Breath Articulations "*sharps*," but of the "*liquids*" and "*nasals*," which are all voice letters, four are represented as "*sharps*," while the fifth, NG, is represented as bearing the same relation to N that V does to F, B to P, etc.

FIFTH. The *articulative* function of the letters Y and W is not recognized. These elements are considered to be always vowels—vowels only. The result is, that this lack of characters to represent two articulations has to be supplied, and is supplied by no less than 40 symbols, to denote their combinations with different vowels. The cumbersome result of such a theory, one would have expected to operate to its rejection, even were it strictly correct ; but it is clearly erroneous.

SIXTH. As there is no articulation *w* in this system, there is of course no *wh* ; and this Breath Articulation is considered to be identical in sound with the word *who* (= *wh* = *hoo*.) Thus, the sentence, "*I saw the man whet the knife*" is *phonographically* (?) perverted into the rather

startling assertion, "*I saw the man WHO ATE the knife.*" Let the most glib upholder of this theory pronounce the latter sentence as rapidly as he can, and see if he will ever make it express the former. Yet it should do so by the mere accident of abruptness, if the theory were correct.

The phonetic notation of speech being now perfectly accomplished in the three forms

- (1) Line Writing,
- (2) World-English,
- (3) Visible Speech,

the employment of a stenographic alphabet for phonetic illustration is discontinued, as unnecessary.

QUANTITY, AND ELEMENTARY COMBINATIONS.

DIFFERENT degrees of quantity may be recognized in the simple elements of speech, vowel and articulate, as well as in their syllabic and verbal combinations. Among the English VOWELS, singly uttered, we distinguish three degrees of quantity. The longest are those vowels which consist of two qualities of sound, viz.: DIPHTHONGS. A diphthong may be composed of either an open vowel tapering into a closer, as a-e (=3 1), ah-e (=7 1), ah-oo (=7 13), aw-e (=10 1), o-oo (=12 13),—heard in *ail, isle, owl, oil, old*; or of any monophthong-vowel flowing into the open and peculiar sound *er* (=8),—as e-er (=1 8), eh-er (=4 8), ah-er (=7 8), uh-er (=9 8), aw-er (=10 8), o-er (=11 8), oo-er (=13 8),—heard in *ear, air, are, urn, drawer, ore, poor*. These are all *diphthongs*; though only the 2nd, 3rd, and 4th of the first set are generally enu-

merated as such.* The initial elements of all these diphthongs give LONG MONOPHTHONGS, which are the next in quantity to the diphthongs. The first sounds of a-e (3), o-oo (12), eh-er (4), uh-er (9), o-er (11), do not occur *separately* as long sounds in English: the first two do not occur separately at all.

The next and shortest class of vowels are those abrupt utterances of voice heard in *ill, ell, an, us, on, book*, etc., which are SHORT MONOPHTHONGS. There is not, as seems to be generally supposed, any degree of duration *essential* to any of the monophthong vowels. The longest may be pronounced as shortly as the regularly short sounds; and any of the latter may be prolonged to the full quantity of the longest of the former class. Thus, if we endeavour to prolong the short monophthongs, or to stop abruptly the long ones, we shall discover that the vowels in *ere* (4), *all* (10), *ooze* (13), are essentially the same vowel formations as *e*(ll), *o*(n), (b)oo(k); and also that *u*(s) is precisely the same sound as the initial element of the diphthong *ur*.

The monophthongs *e* (1) and *ah* (7) are never short in accented syllables in English; but that they can be shortened as readily as those which are sometimes long and sometimes short, will be evident from experiment. In Scotland their short sounds are often heard; they constitute, indeed, a main feature in the Scottish dialect. The vowel in *an* (5), though short in English, is often heard long in Scotland; and it is pronounced long in Ireland instead of 6 or 7, in such words as *aunt, pass, papa*, etc.

Among the ARTICULATIONS there are various degrees of quantity. The *vocal* articulations are essentially longer

* In Smart's Dictionary, the last class of sounds is noticed in the scheme of vowels, under the separate head of "VOWELS WHICH TERMINATE IN GUTTURAL VIBRATION."

than the non-vocal, but in each class there are varieties.

Thus: The Breath Obstructives, P, T, K, are the shortest.

The Breath Continuous Elements, F, Th, S, Sh, are the next longer.

The Shut Voice Articulations, B, D, G, are the next in length.

The Close Continuous Voice Articulations, V, Th, Z, Zh, are longer still.

The Open Continuous Voice Articulations (or Liquids) L, M, N, NG, are the longest simple articulations.

Wh, W, Y, and R are not included, because these articulations do not occur after vowels, but only as initials in English; and all initial letters, whether voice or breath, are alike in quantity.

These differences of articulative quantity will be best observed by prefixing to each articulation the three classes of vowels. The short vowels will be found to have *degrees* of shortness, according to the kind of articulation they precede,—and the long monophthongs and diphthongs will also be found to be considerably affected in quantity by the succeeding articulation. Thus:

Short Monophthongs: ip, if, ib, iv, il

Long Monophthongs: eep, eef, eeb, eev, eel.

Diphthongs: ipe, ife, ibe, ive, ile.

There are other differences of quantity which arise from the COMBINATION of LETTERS into SYLLABLES, and SYLLABLES into WORDS. And first—What is a syllable? We have no non-vocal syllables; *voice*, therefore, is the first requisite; and the syllabic voice may be either confined to one letter, or distributed among several letters. The *vowel* part of a syllable may consist of two elements,

forming either a *closing diphthong*, as *aye, owe, eye, hoy, how*, etc., or an *opening diphthong*, as *ear, air, ore, your*, etc. If such words as *fire, our*, etc., which contain three vowel elements,=a closing diphthong followed by the open sound *er*(8)—be considered monosyllables, then the vowel part of a syllable might be said to contain a triphthong; but when these words are fully pronounced, they are undoubtedly dissyllables, and perfect rhymes to *higher, power*, etc., which are never reckoned monosyllabic words.

In colloquial speech, *fire, higher, our, power*, and all words of this formation, are frequently contracted into one syllabic impulse, by a slurring of the vowels, the close elements 1 and 13 being converted into 4 or 5 and 10 or 11; *ire* being thus pronounced nearly *ah-air* (7-4-8) and *our* nearly *ah-ore* (7-11-8). The mouth undergoes but little increase or diminution of vowel aperture in these latter combinations, and consequently they blend with smooth indefiniteness into one concrete utterance. Indeed, the whole of the possible shadings of vowel-sound between *ah* and *e*, or *ah* and *oo*, or conversely, might be blended monosyllabically; but no return from the closing progression to an opening one, or conversely, could take place without creating a new syllable.*

We have said that the syllabic voice may be either confined to one letter, or distributed among several letters. Thus: *Before and after the vowel* may be placed an *open vocal articulation* or "*liquid*." Take for an example, the

*Dr. Rush, in his excellent work, "The Philosophy of the Voice," says, "It is the *concrete* function of the voice which alone constitutes a syllable." By the concrete function, however, is meant that *tapering* quality of all spoken sounds, as distinguished from the *even* tenor of the sounds of song. These tapering and even qualities have reference, not to *vowel formation*, but to *musical pitch*. All speaking sounds thus *taper, acutely* or *gravely*,—while, in song, the sounds maintain, for a definite time, one musical note. The "unbroken concrete" may, however, be continued through more than one syllable:—for instance, in *toy-ing, joy-ous, pray-est, high-est, shou-y*, etc. What, then, is it that syllables these words? Is it not the necessary *opening* of the sound for the last vowel, after the closing diphthong which precedes it?

vowel *ai* (3), to which let us add an *initial* and *final* articulation of the *open* class; thus, *l ai n*. This is still one *syllable*, and we may *prefix* and *affix* to it an *Obstructive*;—thus, *bl ai nd*. A *Continuous Voice Articulation* might still be added *before* and *after*—though we have not in English any initial continuous voice articulation followed by an obstructive:—this would give us the monosyllable *zbl ai ndzh*. An *Obstructive* might yet be added before and after this combination, without destroying the unity of the syllable; thus, *dzblaindzhd*. This barbarous-looking word is not so foreign to our language as at first sight it may appear. With the exception of the *initial dz*, the combination is a perfectly English one, occurring in such words as *cringed*, *changed*, *bulged*, etc.

The organs *slide* from point to point in these clustered articulations, and there is no openness in the sounds. The open continuous elements (liquids), it will be observed, are immediately before and after the vowel. They could not be elsewhere without creating other syllables—because for them the voice has a vowel-openness and purity. Thus, *l* and *n*, as elsewhere shown, often of themselves make syllables in English *utterance*,—though not in orthography, for we write a silent *e*,—as in *middle*, *bidden*, *bible*, *even*, *fasten*, *thistle*, etc.*

The liquid *l* may be prefixed to either of the other liquids in the same syllable. Thus, we still write *ln* and *lm*, though we no longer pronounce the former, and only in a few words the latter; but neither of the other liquids (which are nasals and orally obstructive) can be uttered

*Our orthographic process refuses to acknowledge any syllable that has not a vowel letter; so when we *write* a vowel with the liquid, the syllabic effect of the liquid is not disputed; but if, as in *spasm*, *rhythm*, etc., we write no vowel, then, though the syllabic sound is the very same, the syllable is not acknowledged. While *listen* (= *lis-n*) is reckoned a dissyllable; *rhythm* is inconsistently excluded from the same class, and called a monosyllable. Either these words are both monosyllables or both dissyllables, for their elements of sound are letter for letter of the same class.

before *l* in one syllable, because the nasals *shut the mouth* and are, therefore, before *l*, which opens a free oral passage, the same as the obstructives B, D, G. We might then insert *l* before the *n* in the illustrative word before given, and so present, as a *monosyllabic combination*, no fewer than five articulations after a vowel—*dzblaindzhd*.

No *voiceless* articulations could be introduced among these vocal letters without cutting up the combination into as many syllables; nor could any voice-letter be inserted in a combination of breath-articulations without creating for every voice articulation so added, a new syllable. Thus, the letters *spstflinktsths*, in this arrangement, constitute a *monosyllable*; but separate the vocal articulations from the vowel, and insert them among the articulations, and the same letters will constitute a *trissyllable*; thus, *spstflknsths*. Both these words are capable of distinct articulation; but it may cost the reader a little practice before he is able to enounce them with fluency.

The following are all the articulative combinations which occur at the beginning of English syllables.

INITIAL ARTICULATIVE COMBINATIONS.

bw as in buoy	gl as in glass	sl as in slave
by " beauty	gr " great	sm " smile
bl " blade	kw " queen	sn " snow
br " bride	ky " cue	sf " sphere
py " pew	kl " cleave	sp " spire
pl " place	kr " crime	st " steam
pr " price	my " muse	sk " sky
dy " due	ny " neuter	spl " spleen
dw " dwarf	fy " few	spr " spring
dr " draw	fl " flight	spy " spume
dzh " jew	fr " fright	str " straw
ty " tune	vy " view	sty " stew
tw " twelve	thw " thwart	skr " scream
tr " try	thy " thew	skw " squint
tsh " chair	thr " three	sky " skew
gw " guelph	sw " sway	shr " shrine
gy " gewgaw	sy " sue	

In the quantitative Serieses of Vowels, at page 87, we have shown the effect of single articulations on the vowel quantities. We shall now show the numerous degrees of syllabic quantity which arise entirely from articulative combinations.

Quantity is generally considered to have reference to Vowels only ; but if it is intended to mean the duration of the enunciative process, it must include Articulations also.

The *Liquids*,—or as their functions in syllables would rather require them to be called, *transparent letters*,—*before a single final articulation*, give the next degree of quantity greater than that of the single articulation ; *double articulations* are the next longer ; then *liquids before double articulations* ; then *treble articulations* ; next *liquids before treble articulations*, and so on. But as the articulations are not all of the same duration, their combinations present a great many slighter differences of quantity. The liquids are so thin a veil before Breath Articulations that they hardly for an instant intercept our view of the adjoining letter ;—before Voice Articulations they become more massive, and *two liquids* are the *longest liquid articulations* in the language.

Let the student read the following combinations in the order in which they are arranged, and he will be able to trace the nice gradations, which connect by no fewer than nineteen steps, the quantitative extremes of *voiceless combinations* ; and by fifteen, those of the *vocal combinations*.

The practice of the following words will be found extremely useful in giving distinctness and fluency of articulation. The test of correctness is,—HEAR EVERY LETTER.

TERMINAL SYLLABIC COMBINATIONS OF BREATH
ARTICULATIONS.

Liquid and Single Articulations.

1. Help, felt, milk, tent, lamp, dreamt, ink, etc.
2. Self, health, else, Welsh, ninth, dance, nymph, strength, etc.

Double Articulations.

3. Apt, act, etc.
4. Steps, depth, nets, eighth, watch, ox, etc.
5. Left, wasp, fast, ask, etc.
6. Safes, fifth, broths, etc.

Liquid and Double Articulations.

7. Gulpd, milked, stamped, succinct, etc.
8. Alps, bolts, belch, silks, prints, French, imps, tempts, thanks, etc.
9. Ingulfed, fail'st, against, com'st, sing'st, etc.
10. Gulfs, healths, tenths, nymphs, lengths, etc.

Treble Articulations.

11. Adept, expects, etc.
12. Sharp'st, sat'st, patched, look'st, etc.
13. Eighths.
14. Thefts, asps, costs, desks, etc.
15. Fifths.

Liquid and Treble Articulations.

16. Help'st, halt'st, filched, milk'st, hint'st, finched, limp'st, attempt'st, think'st, etc.
17. Twelfths.

Quadruple Articulations.

18. Texts.
19. Sixths.

TERMINAL SYLLABIC COMBINATIONS OF VOICE
ARTICULATIONS.

Liquid and Single Articulations.

1. Bulb, old, rhomb, hemmed, finned, hanged, etc.
2. Delve, ells, aims, bronze, pangs, etc.

Double Articulations.

3. Stabbed, begged, etc.
4. Cabs, adze, edge, eggs, etc.
5. Saved, seethed, grazed, rouged, etc.
6. Graves, bathes, etc.
7. Helm, etc.

Liquid and Double Articulations.

8. Bulbed.
9. Bulbs, folds, bilge, rhumbs, lands, change, etc.
10. Involved, bronzed, etc.
11. Wolves, etc.
12. Overwhelmed, etc.
13. Elms, etc.

Treble Articulations.

14. Beseiged, etc.

Liquid and Treble Articulations.

15. Bulged, changed, etc.

TERMINAL COMBINATIONS OF MIXED ARTICULATIONS.

From what has been said on the component elements of syllables, it will be evident that voice articulations cannot follow breath ones in the same syllable, but that breath articulations may follow vocal ones. The following mixed combinations (besides the Liquids already given in the first of these Tables) are all that occur in English.

1. width, etc.
2. brib'st, midst, hugg'st, etc.
3. striv'st, sooth'st, etc.
4. hold'st, etc.
5. delv'st, etc.

A further variety of syllabic quantities arises from the
COMBINATION OF SYLLABLES INTO WORDS.

An accented syllable—whatever its constituent elements—followed by one unaccented, is shorter than a monosyllable containing the same elements; followed by two unaccented syllables, it is still shorter; by three, shorter still; and so on, it decreases in quantity as its terminal unaccented syllables increase in number. Thus, *lit*, *litter*, *literal*, *literally*.

It is further to be observed, that the accented syllable is longer when the syllable next to it begins with an

articulation than when it begins with a vowel. A comparison of *love*, *lovely*, *loveliness*, with *love. loving, lovingly*—will manifest this distinction.

We have now shown the differences of quantity *essential* in the separate elements of speech; and the quantitative influence of Articulations on Vowels, and of Unaccented on Accented Syllables. The influence of another vowel immediately succeeding the accented one, as in *theatre, drawing*, etc., remains to be noticed. If we compare any words of this class with others which have the shortest articulation interposed between the vowels—as,

seeing,	fluid,	sawest,
seated,	fluted,	soughtest,

we shall find that (in their ordinary pronunciation) the vowels *are shorter* in the first than in the second class of words. The judge of this is, of course, *the ear*.

For an accurate test, however, it will be necessary to compare the words—not separately, but in a sentence, that they may have their ordinary colloquial quantity; for as the words of the first class more easily *bear* an increased quantity than those of the second, they would be very liable to receive an unconscious addition in separate comparison. Test them in the following sentences :

Seeing you *seated* here, I came to you.

Lucky fellow ! thou *sawest* that for which thou *soughtest* not.

That *fluted* glass looks very like a streaming *fluid*.

As a general principle, then, accented monophthong vowels preceding another vowel are shorter than when they are before any articulation.

In the preceding Quantitative Tables, the nature and extent of our Articulative Combinations have been shown. To complete the view of English Elementary Compounds, we shall now exhibit a corresponding arrangement of Vowel Combinations.

The English language is usually supposed to be more deficient of vowel combinations than it really is. It certainly has a great proportion of articulations, and long—because final—*clusters* of these elements; but they give a strength and dignity to utterance, for which euphonious vowel-smoothness would but ill compensate.

The apparent scarcity of vowels, however, arises in great part from the rude way in which these soft elements are slurred, and curtailed of their “fair proportion” by our speakers. Let the sounds be fully given, with all their tapering qualities, and softly blending in their combinations, without careless elisions and clippings, and the English Tongue will be found to possess as much of vowel-euphony as is consistent with the masculine character of its utterance.

The following instances of Vowel-Combinations,—accented and unaccented,—are commended to the student’s tasteful practice. The perfect enunciation of these combinations, without either of the sounds being impaired in quality, is one of the neatest acts of speech, and a sure criterion of the cultivation of the reader.

ENGLISH VOWEL COMBINATIONS.

- | | | |
|--------|-----|---|
| Vowels | 1-1 | Carries, congeries, minutiaë, perizæci, pre-elect, sanies, series. |
| “ | 1-2 | Being, seeing, zeine, deity, theism, deism, cuneiform, decide, corporeity, nereid, howbeit, seity, spontaneity, velleity, reiterate, atheist. |

- Vowels 1-3 Create, creator, re-agent, enunciation, verbiage, ideate, permeate, affiliation, lineage, depreciate, initiate, excoriate, foliage, malleate, muriate, obviate, recreate, satiate.
- " 1-4 Re-echo, arietta, Vienna, acquiesce, oriental, pre-eminent, siesta, ambient, requiem, inscience, orient, lenient.
- " 1-5 Ideal, pæan, Sabeian, pharisean, react, zodiac, myriad, pancreas, lineal, dealbate, meander, genealogy, adamantean, alias, encomiast, bronchial, burial, cardi-algy, caveat, anteat.
- " 1-6 Agreeable, screable, cochleary, area, zea, diarrhœa, dulia, mania, dyspnœa, malleable, nausea, scoria, trachea.
- " 1-7 Dearticulate, pianist, linear.
- " 1-8 Near, bier, deer, appear, cheerful, afeard, veneer, barrier, moneyer, courier, rapier.
- " 1-9 Theurgy, lyceum, mausoleum, museum, idiot, idiom, curious, permeous, cupreous, axiom, amphibious, calcareous, carneous, furious, geranium, igneous.
- " 1-10 Deaurate, geology, œolipile, areotic, areometer, ebri-osity, curiosity, georgic, geotic, heliolatry, meteoric, periodical, teleology, deobstruct, junior, senior, meteor.
- " 1-12 Leo, peony, zeolite, pleonasm, graveolent, deodand, geode, embryo, neoteric, helioscope, aposiopesis, ratio, urceolate.
- " 1-7-1 Radii, Agnus-Dei.
- " 1-10-1 Helioid, cardioid.
- " 1-12-1 Vitreo-electric.

The third vowel, it will be remembered, is a diphthongal sound. Its finishing quality of e (¹) or before very open vowels of i (²) must in all cases be heard,—often with extreme delicacy of shading; but the total omission of it is un-English.

- Vowels 3-1 Aerial, phaeton.
- " 3-2 Playing, grayish, laity, mosaic, trochaic, hebraic, clayey, judaical, hebraist, archaism, judaism.
- " 3-4 Obeyest, weigheth, prayest.
- " 3-5 Naiad, abeyance, conveyance.
- " 3-6 Affraiable, weighable.

- Vowels 3-8 Weigher, player, gayer, delayer.
 “ 3-10 Aorta, archæology, chaos, chaotic.
 “ 3-11 Aorist.
 “ 3-12 Aonian, kaolin.
 “ 3-7-1 Grey-eyed, hebraize, judaize.

The 4th vowel occurs initial in but one combination—4-8, as in *air*, *heir*, *ere*, *prayer*, *care*, etc. In Scotland, a diphthong compounded of 4-1 or 4-2, is commonly heard instead of 7-1, in *my*, *buy*, *sigh*, etc.

The 5th vowel (an), with the 12th or 13th, is often heard among English speakers, instead of the more open vowel which correctly forms the first sound of the diphthong *ou*. Thus, *bough*, *thou*, *how*, etc., are pronounced with 5-13, bā-oo, thā-oo, etc. There is a mincing effect of affectation in this peculiarity.

- Vowels 7-1 Buy, try, sigh, I, fye, lie.
 “ 7-13 How, noun, drought, thousand.
 “ 7-1-1 Hyena, hyemal, empyema, trieterical, syenite, dietetic, diesis, quietus, striæ.
 “ 7-1-2 Buying, sighing, dying, trying, thine; skyey, shyish.
 “ 7-1-4 Buyest, dieth, science, quiescent, diæresis, scientific, lien, client (variety, quiet, notoriety, piety, propriety, ubiety).

The words within brackets are often—if not generally—pronounced 7-1-2. In Scotland they are contracted into 7-1, and pronounced *pah-eety*, *varah-eety*, etc.

- Vowels 7-1-5 Diameter, iambus, dialogist, eyas, sciatica, biangulous bias, sialogogue, alliance, phial, elegiac, sciagraphy, trial.
 “ 7-1-6 Via, viaduct, diapason, pianet, friable, striature, sriasis.
 “ 7-1-8 Fire, crier, dyer, trierarch, dire, briery, fiery.
 “ 7-1-9 Orion, lion, pious, triumph, scion, triumphal, iron, diurnal.
 “ 7-1-10 Ionic, triobolar, myology, scioptic, dioptrics, diorthosis, prior.

Vowels	7-1-12	Iodine, violent, sciolist, pioneer, myopy, bryony, inviolable, diocese, violin, meionite, meiosis.
"	7-13-1	Advowee.
"	7-13-2	Ploughing, allowing, vowing.
"	7-13-4	Allowest, voweth, vowel, bowel, rowel, towel.
"	7-13-5	Allowance, avowal.
"	7-13-8	Our, power, shower, dowery, hour-glass, towering.
"	7-1-7-1	Dry-eyed.
"	10-1	Boy, oil, noise, adroit, conoidic, avoid, soil, alloyed, join, point.
"	10-2	Sawing pawing, drawing, flawy, gnawing, rawish, thawing.
"	10-4	Drawest, gnaweth, sawest.
"	10-5	Withdrawal.
"	10-8	Drawer, rawer, war.
"	10-1-2	Boyish, enjoying, annoying, toying, coyish, cloying.
"	10-1-4	Destroyest, joyeth, employest, annoyeth.
"	10-1-5	Buoyance, annoyance, royal, royalty.
"	10-1-8	Employer, alloyer, coyer.

The 12th vowel, like the 3rd, is diphthongal. With less or more distinctness, its compound quality should be heard in every combination in careful reading. Colloquially, however, and especially before very open vowels—the more open and simple *o* (11) is used instead of *o-oo* (12). Care must be taken that *the lips* do not too much modify the 12th vowel, or there will be a tendency to produce the articulation *w*, instead of the vowel *oo*, before another vowel.

Vowels	12-1	Coeval, proemial.
"	12-2	Stoic, owing, doughy, coincidence, poet, poetry, heroine.
"	12-3	Boation, acroamatical.
"	12-4	Owest, knowest, poem, poetical, aloetics, coheir, efficacy, soever.
"	12-5	Coagulate, coadjutor, coagment, coadunition, salso-acid, retroaction.
"	12-6	Oasis, zedoary, proa, boa, coacervate.
"	12-7	Coarct, coarctation.

Vowels	12-8	Coerce, lower, mower, borrower.
"	12-10	Co-operate, zoology, zoography, co-ordinate, co-optation.
"	12-12	Zoolite, zoophyte.
"	12-7-1	Polychroite.
"	13-2	Bruit, wooing, truism, druid, fluid, dewy, ruin, fortuitous, impuissance, puissant, assiduity, pituitary, comminuable, jesuit, jesuitical.
"	13-3	Sinuate.
"	13-4	Cruel, fluent, duel, incruental, inuendo, circumfluence, affluent, minuet.
"	13-5	Pursuant, renewal, truant, accentual, casual, manual, mutual.
"	13-6	Suable, pursuable, estuary, mantua, mulctuary.
"	13-8	Brewer, tour, your, cure, poor-house, moorish, reviewer, durable, mure, lure, surely.
"	13-9	Sinuous, innocuous, assiduous, vacuum, fatuous.
"	13-10	Fluor, sinuosity, impetuosity.
"	13-12	Actuose.
"	13-7-1	Pituite.

ACCENT, RHYTHM, EMPHASIS, AND THE GROUPING OF WORDS.

ACCENT.

EVERY word of more than one syllable has what is called an accent,—that is, a superior decree of prominence, by stress or inflexion,—on one of its syllables. Without accent, speech would be drawling, monotonous, and unemphatic. Accent ties syllables into words, and enables the ear to comprehend at once the boundaries of each verbal utterance. Accent, besides being thus a source of much variety, provides a simple means of increasing our stock of words, and enhancing their utility. By accent, for instance, we can make two syllables serve for four purposes; three syllables might serve for six,

four for eight, etc. Thus, the syllables *man* and *kind*, separately uttered, are two words; united by the accental tie, they form the words *mankind*, as distinguished from *womankind*, and *mankind*, the whole human race. In this way, by placing the accent alternately on the first, second, third, or fourth syllable, the same set of sounds might be varied in their application to the expression of many of the nicer distinctions of meaning, which are at present confounded under one invariable term. This is a means of expressiveness but little employed, yet it might be made use of to a considerable extent, especially in scientific and philosophical terminology, with much advantage to accuracy.* Such accental change is common on dissyllables in English as a distinction between nouns or adjectives, and verbs of the same orthography. The nouns, etc., have the higher accent, the verbs the lower; as in ac'cent accent', con'cert concert', des'cant descant', fre'quent frequent', pres'ent present', rec'ord record', sub'ject subject', trans'port transport', etc.

In words of *three or more* syllables, when the accent falls on the *third*, there is also an accent, but of secondary force, on the *first* syllable. If the primary accent is on the fourth syllable, the secondary accent may be either on the first or second; if there are four syllables before the primary accent, there will be either a secondary accent on the second syllable, or two secondaries—namely, on the first and third; and if there are five syllables before the

* In Smart's Dictionary, we find the word "perfunctory" marked with the primary accent on the first syllable, and the secondary on the third,—per'functo'ry;—its meaning being "done with the sole view of getting *through*, regardless how done; slight, careless, negligent;" and in a note the author remarks,—“The original of this word is a Latin adverb, of which the verb is the participle, and the other related words have just the contrary meaning; so that if it had been derived from them instead of the adverb, it would have signified *completely done, thoroughly performed*, IN WHICH CASE ITS ACCENTUATION WOULD HAVE BEEN PERFUNCTORY; but, formed as it is from per'functo'ri-e, its proper accentuation is deemed to be that assigned to it above.”

primarily accented one, there must be two secondary accents, but they may fall either on the first and third or first and fourth syllables.

The following are single examples of each of these classes of *Secondarily Accented Words* :

Primary accent on the *third* syllable, and secondary on the *first*:—En'tertain'', fun'damen''tal, em'blemat''ical, su'pernu''merary.

Primary accent on the fourth syllable and secondary on the { first, ma'themati''cian.
 { second, ency'clope''dia.

Primary accent on the fifth syllable, secondary on the { second, exem'plifica''tion.
 { first and third, cir'cumna'viga''tion.

Primary accent on the sixth syllable, secondary on the { first and third, in'commu'nicabil''ity.
 { first and fourth, in'comprehen'sibil''ity.

When three or more syllables follow the accent, there sometimes is, but more frequently is not, a secondary accent on one of them. When there is, it generally falls on the second, but sometimes on the third syllable after the primary accent. The following are instances :

Secondary accent on the second syllable after the primary :—ab''dica'tive.

Secondary accent on the third syllable after the primary :—al''dermanlike'.

The secondary accent is, in all the preceding instances, separated from the primary, by unaccented syllables ; but there may be a secondary force on a syllable which is not separated from the primary.

Any prefix may receive emphatical importance in this way,—as co'e''qual, con'join'', de'hort'', e'duce'', il'le''gal,

im'mense''! in'deed''! pan'soph''ical, pre'mer''it, re'ech''o, un'told'', etc. The same accentuation occurs in the common words, so'so'', tee'to''tal, etc.; and the word *amen*, which is universally acknowledged as a doubly accented word, has not two equal accents, but a secondary and a primary, thus, a'men''. The word *farewell*, also, has two accents,—the primary accent sometimes on the first and sometimes on the second syllable.

When words differing only, or chiefly, in one of their syllables, are used antithetically, the opposition is expressed by transposition of the accent to the syllable of difference. Thus, instead of forgiv'ing, injus'tice, undone', etc., we say *for'*giving, when opposed to giving, *in'*justice, when opposed to justice, *un'*done, when opposed to done, etc.

When the opposition is between two prefixes otherwise unaccented, they take the primary force, and the ordinarily accented syllable retains the secondary accent,—as in in''crease', when opposed to de''crease'.

And so with antithetic *terminations*; we might give them the primary accent, and mark the ordinarily accented syllable by secondary force,—as in sym'bol'' when opposed to cym'bal''.

When the syllable of difference happens to be under the secondary accent, we mark antithesis by transposing the primary to the place of the secondary, and the secondary to the place of the primary accent; as in prop''osi'tion when opposed to prep''osi'tion.

RHYTHM.

The succession of the accents *in sentences* constitutes RHYTHM;—a subject which has been involved in much obscurity by the way in which writers have treated of it,

but which is sufficiently simple to be reduced to practice, long before the complex theories of rhythmical writers could be fairly studied. To express the pulsation and remission, time and rest, which constitute the elements of rhythm, sets of symbols have been invented, which are as unnecessary to the full understanding of the subject as they are clumsy and deforming to the didactic page.

Rhythm, good or bad, is an element of all speech. In every sentence, however uttered, there is a rhythm; it may be stiff—like the action of a person on stilts; regular and firm—like the march of a soldier; irregular and weak—like the sidling progression of a simpleton; undecided—like much ordinary walking; limping—like the motion of a cripple; hurried or slow; leaping or creeping; staggering or steady; jolting or smooth; graceful or vulgar: in short, it may have every characteristic of action. As various as are the modes of walking, between the courtier's gait and the hobble of a clown, or the styles of gesticulation between the expressive elegance of an accomplished actor, and the thumping of a ranting preacher, so numerous and so characteristic are the kinds of rhythm heard in the different departments of oratory, and in colloquial speech.

The succession of the accents in poetry is marked by a uniformity of *thesis* and *arsis*—of heavy and light syllables—which is varied within very narrow limits;—one, two, or three unaccented syllables preceding or following the accent with a musical regularity. This metrical accentuation, in skillful writing, coincides with the accentuation of sense; but the latter does not require nearly the number of accents that the former demands. Consequently, the judgment and skill of the reader are peculiarly tested in clearly discriminating and in vocally

distinguishing the accents of sense, without losing or concealing the accents of the metre or rhythm of the poetry. The succession of the accents in prose is irregular and fluctuating; susceptible of variety from every impulse of the writer, and no less susceptible of variety from the intelligence, the taste, and the vocal ability of the reader.

The regulation of the accents so as perfectly to bring out the sense and expressiveness of a passage is often a very nice point, requiring much judgment and skill; it affords, therefore, ample scope for the display of these admirable qualities in a public reader or speaker; and no more useful exercise can occupy the attention of the elocutionary student.

The various readings of disputed passages in the poets, especially in Shakspeare, which occupy the pages of critics, and afford such exercise and opportunity for mental and vocal discrimination, are just so many varieties of rhythm. The pulsation of accent on this syllable, and the remission on that, are the topics of the most voluminous and learned disquisition.

EMPHASIS.

Emphasis is among accents what accent is among syllables;—a prominence given to one accent at the expense of the subordination of other associated accents. Emphasis depends on contrast or antithesis, expressed or implied. All antithetic words are not necessarily under emphasis. The first of any contrasted pair will be accented feebly or strongly with reference only to the preceding context; the second of the contrasted words will be necessarily emphatic, to mark its relation to the first.

Those words in a sentence which express ideas *new* to the context are pronounced with the first degree of

emphasis, while, conversely, all words involved in preceding terms are unemphatic; words *contrasted* with preceding terms are more strongly emphasized; and words suggestive of *unexpressed* anthesis are emphatic in the highest degree.

Any quality of utterance may render a word emphatic to the ear,—tone, time, force, pitch, pause, etc. The expressive distinction of emphasis depends more on the relative subordination of associated words than on any absolute quality imparted to the utterance of the emphatic word.

THE GROUPING OF WORDS.

Every single word is not the sign of a distinct idea. Grammatical words are rather, merely, syllables of what has been called the "*oratorical word*," which fully expresses the idea, or completes some part of it. Words, therefore, in correct utterance, fall into expressive groups, which are separated from each other, not always by a pause, but by some break, some change of modulation, inflexion, or other appreciable variety of style, which clearly marks to the ear and mind, the boundaries of each group or oratorical word.

The principal grammatical words in every sentence are the Noun and the Verb; and these, when the ideas they express are both new to the context, are kept accentually separate. With either of these primary words may be associated qualifying words—adjectives with nouns, or adverbs with verbs, or clauses equivalent to adjectives or adverbs; and such qualifying words or clauses are, by accent, compacted with the noun or the verb into one substantive or verbal group, or "*oratorical word*." The adjective, adverb, or equivalent clause may itself be

qualified by another word or clause,—called also adverbial—and this secondary qualifying expression will be united with the substantive or verbal group. A conjunction, a preposition, or an article, or all of them, may further be associated with the substantive group; and a conjunction, a pronoun, or an auxiliary verb, or all of them, may be associated with the verbal group. Thus :

EXAMPLE OF A SUBSTANTIVE GROUP.

conj.	prep.	pro. (art.)	adv.	adv.	adj.	noun.
<i>and</i>	<i>to</i>	<i>his (the)</i>	<i>very</i>	<i>greatly</i>	<i>increased</i>	<i>displeasure</i>

EXAMPLE OF A VERBAL GROUP.

conj.	pro.	aux.	adv.	aux.	aux.	adv. phr.	verb.
<i>and</i>	<i>it</i>	<i>will</i>	<i>not</i>	<i>have</i>	<i>been</i>	<i>almost at all</i>	<i>impaired</i>

Words which are thus grammatically related are accentually joined, as it were, into one compound word; but proximate words between which there is not a mutual relationship or grammatical government, are kept accentually separate; as, for instance, two or more adjectives, nouns, or verbs, in apposition. It is to be noted also, that grammatical sequences of words are often interrupted by a pause, as an important means of expressing emphasis.

The relation of primary and secondary accents among the words which constitute a grammatical group, depends on the sense intended to be conveyed. The primary accent may be placed even on the least important grammatical word—an article, preposition, or a pronoun—if the ideas conveyed by the other words have been already expressed in the context, or if such ideas are necessarily involved in preceding terms. Wherever the *point* of the sentence lies—and the apprehension of this depends on the reader's discrimination—there the primary accent

will fall. The oratorical group may be compared to a diamond cut with facets corresponding to the grammatical words or syllables in the group; and the skilful reader turns now this facet and now that to the mental eye of the hearer, and so reflects a flash of meaning from one particular surface of the many-angled thought.

INFLEXION, MODULATION, ETC.*

ALL spoken sounds, however abrupt, have, correctly, an inflected formation; though ears unaccustomed to very accurate observation may not readily detect it in the little tittles of sound heard in many of our syllables,—*it, at, ate, up*, etc. But sufficiently close attention will discover inflexion in the shortest as well as in the longest of our sounds. Those prolonged monotones which are heard in what is called a *sing-song* delivery, are, therefore barbarisms; they belong neither to speech nor song: they are a sort of recitative, passionless, senseless, and unnatural, to which, nevertheless, good sentiments are often chanted and drawled by worthy men.

Animated conversation is the most inflected kind of speech, and the language of solemn warning or of prayer the least inflected. Reading, and speaking from memory, are generally much less inflected, and therefore less natural, agreeable, and impressive, than conversation and extemporaneous delivery; and that reading must be considered the best which approaches most nearly in its tones to conversational and extemporal variety.

* For a more complete and practical treatment of these subjects, and of the various departments of Rhetorical Delivery, the reader is referred to the Author's "Elocutionary Manual" of Principles and Exercises, and to the "Standard Elocutionist" (Readings and Recitations).

The subject of Inflexion has been more fully treated of by most authors than any other department of Elocution; and the mass of Rules, Observations, and Examples which they have accumulated have so overloaded the simple natural principles that lie at the bottom of all genuine rules, that not one student in fifty can discover them. The consequence too often is, that Elocutionary students either throw up the study in disgust; or else, judging "Elocution" to be regulated by no fixed principles, but only by taste or caprice, form styles of their own, founded on some favorite model, or combination of incongruous models; and thus gradually swell the ranks of tuneless ranters, or level drawlers.

Elocution, according to the great majority of modern writers on the subject, appears to consist in nothing else than the management of Inflexion. Ask them "what is the chief point to be studied?" repeat, and reiterate the question; the answer is still the same, "Inflexion! Inflexion!"

Demosthenes declared the most important part of a speaker's study to lie in "Action"—that is, in Pronunciation, Modulation, Gesture, and all the essentials of manner—in other words, in *Delivery* generally; and what part of Delivery he considered of the first importance, his own procedure showed,—Articulation, distinctness, fluency, energy of utterance. How very small a part of oratory Inflexion is, and how small a part of a speaker's study it is worthy to be, cannot fail to be felt by every practical orator at the present time, as it undoubtedly must have been by the matchless "thunderer" of ancient Greece.

Oratory was of old a very comprehensive subject, and its study was the labour of a life. It included the arts of

Logic, Rhetoric, and almost every department of general knowledge, and mental or moral discipline, as well as Pronunciation, or what we now call Elocution* or Delivery. Hoary hairs were considered indispensable to the consummate orator, whose laborious preparations were supposed to require the length and vigour of the youth and prime of life. Consistently with this, Oratory was emblemized under the figure of an Old Man: threads of amber issuing from his lips, and winding into the ears of gaping auditors. *Our* orators expect to jump into the rostrum, and oratorical ability, at once; and without preparation even for the first and most indispensable requisite of public speaking,—Articulation. Our learned men affect to despise the very name of oratory. May not the reason be,—they *are* not orators? They neither feel nor know the power of Eloquence. They can prepare the beautiful anatomy of a discourse or declamation, but to animate it with the voice, the look, the action of natural utterance, is beyond their skill; it falls lifeless from their hands.

The leading error of Elocutionists consists in this, that, overlooking the *paramount importance of general principles*, they enter at once on a series of rules, which a proper *rationale* of the vocal movements would enable students to deduce for themselves. Thus, without any explanation of the mechanism, extent, or general functions of the inflexions, they begin at once to teach their application to sentences of various construction: and in laying down precepts, they seem more desirous to teach their pupils to *infect* than to *reflect*. The principles which regulate the application of the inflexions are so simple, so natural and consistent, that no reflecting pupil can fail to apprehend and apply them, almost immediately, when

intelligibly explained. On the proper *mechanism* of the inflexions depends much of the melody and variety, as well as the appropriate expressiveness to sense and sentiment, of the voice.

It has been well remarked of the system of Mr. Walker,—the founder of the Inflexion School of Elocutionists—that “no system could have been invented better adapted to please all parties; as every one is at liberty to make use of those ‘intervals’ which habit has rendered easy to him in his common accent. Thus, the teacher residing in Cork, or Dublin, or Belfast, in Glasgow, Edinburgh, or Inverness, in the East or in the West, the North or the South of England, can use the system of Walker, read according to his rules, though not one of them may agree with another in regard to the interval or the extent of the inflexion; and while, in fact, they are merely teaching their own manner to the pupil.”

SIMPLE INFLEXIONS.

There are but two modes of vocal progression,—namely, upwards and downwards, in the musical scale,—and, consequently, there are but two simple inflexions. Each inflexion has an *opening force* and *fulness*, from which it *tapers softly* to its acute or grave termination. The beginning of the inflexion is therefore the emphatic part; and, as the inflexions are named “rising” or “falling,” from their progression upwards or downwards, without reference to the pitch of their commencing note, some confusion is apt to arise at first between the *name* and the *sound*, from their apparent opposition, in abrupt and emphatic tones. For, the more emphatic an inflexion is, the *lower* it begins when it is called *rising*, and the *higher* it begins when it is named *falling*.

This principle is of much importance to public speakers, whose general ignorance of it, as evidenced by their strained or monotonous voices, is, doubtless in great part, owing to the almost universal silence of Elocutionary books upon the subject.

COMPOUND INFLEXIONS,—CIRCUMFLEXES OR WAVES.

The two modes of vocal progression, united on one syllabic utterance, form those expressive compound inflexions called *circumflexes*, or more accurately, as Dr. Rush has named them, *waves*. These vocal waves are very common in all natural speaking. They are capable of much variety by the different proportion of their parts. A strong rise may be united to a fall of a semitone or an octave, or of any extent; and a full downward sweep may be blended with an equal variety of rising intervals.

The circumflexed or waved inflexions generally give to language an *allusive or referential expressiveness*, or add to it a meaning which the words do not literally convey. Thus, the Rising Wave is used for *Suggestive Emphasis*—it is the appropriate intonation of *inuendo*;—and the Falling wave for *Positive Emphasis*—with an allusive or referential effect. This vocal progression is the intonation of derision and irony. The Rising Wave is used suggestively, when Brutus says to Cassius—

“For *Thou* can raise no money by vile means:”

it insinuates and hints at, rather than openly expresses, an accusation. The Falling Wave directly and unmistakeably points an accusation, as when

“Nathan said unto David, ‘*Thou* art the man!’”

As a general principle, it may be affirmed that words intended to be understood literally should be inflected

with *simple* turns—which are, invariably, the intonations of candour, sincerity, and artlessness:—while words to be accepted in some peculiar, figurative, or with some added sense, require the compound turns, which are the natural intonations of artifice. Figurative language of every kind abounds with circumflexes.

APPLICATION OF THE INFLEXIONS.

The application of the vocal inflexions to sentences is governed by principles equally simple with those which regulate their mechanism. As all inflexions may be resolved into two kinds,—upward and downward,—so all rules for their application may be resolved into two corresponding Fundamental Principles.

The rising progression connects what has been said with what is to be uttered, or with what the speaker wishes to be implied or supplied by the hearer; and this, with more or less closeness, querulousness, and passion, in proportion to the force and extent of the rise. The falling progression disconnects what has been said from whatever may follow; and this with more or less completeness, exclusiveness, and passion, in proportion to the force and extent of the fall.

The melody of speech requires that every emphatic inflexion should be preceded by a minor inflexion, of opposite pitch,—high before a low accent, low before a high accent. According to the emphasis of the utterance, this preparatory inflexion is turned towards or from the pitch of the accent:—the former being the less, the latter the more, emphatic arrangement.

Rules for the application of the Inflexions have generally been founded on the grammatical forms of sentences and clauses; as if all members of like construc-

tion must needs be uniformly inflected ! The principle of Nature is rather that Rules for the Inflexion of sentences must be founded on the inherent expressiveness of the Voice. The vocal turns communicate to language a meaning and force which are altogether independent of constructive forms ; which are inherent in the tones, and which may apply with equal justice to all possible arrangements of words, according as the intent of the speaker requires the vocal effects. A grammatical assertion may be pronounced interrogatively, and a constructive enquiry may have the tones of dogmatism or imperativeness.

The habit of reading with other than natural tones, with limited inflexions, or with monotonous repetitions of the same radical or pitch-notes, will be most readily broken by the practice of strong and varied inflexions *on single words*, either as they occur in a vocabulary or in ordinary composition. The latter will at first afford the easier and the safer exercise ; for, in reading tables of unconnected words, the voice most naturally inclines to a sameness of tone, which it requires a constant effort to counteract. Nevertheless, the reader who cannot, at will, pronounce unconnected words in any manner, or with any degree of inflexion, has not acquired sufficient control over the fundamental movements of the voice.

The custom of inflectively anticipating the next word, phrase, or sentence, because it is before the eye, is one of the most common causes of ineffective reading, especially of that kind which consists in too frequent elevations of the voice. Few readers err in the opposite way by the misplacement of conclusive turns ; this constant linking-on of sentences may be said to be the most prevailing form of defective expression in reading. The worst reader generally lets slip a natural note, when he has to

turn over a page to conclude a sentence. If the utterance is querulous, doubtful, or progressive, or if the sense is undeveloped, his voice *will rise* into naturally suspensive elevation; and if the utterance is *positive*, or *if the sense is formed*, however incomplete the sentence may be, his voice *will fall here: and this because he does not see in advance of his utterance*.* Let the reader reflect that his hearers are in precisely the same predicament at every word—they do not see the next; and their ears as naturally expect, as his voice naturally makes, a suspensive or conclusive turn, correspondent to the mental effect of the utterance. If he concludes a clause or sentence with a rising turn, because he sees another after it, they are led to consider what has been said as incomplete, and dependent on, or importantly qualified by, what is to follow; and they feel disappointed and annoyed when the expected utterance comes out, and contains no reference to what preceded. Not only so, but that which in composition was meant to be conclusive and convincing, leaves on the minds of the hearers an unsatisfactory and indecisive impression—the natural effect of the reader's inappropriate intonation.

The way in which school exercises are generally allowed to be rattled and gabbled over, is productive of much mischief, both to articulation and vocal expression. Habits of speech are formed at public schools which cannot be thrown off in after-life without more labour and watchfulness than nine out of ten persons could either encounter or afford to bestow. Stammering, even, is often traced to the uncontrolled emulation of a class;

* It is not to be inferred that good readers do not look in advance of their utterance; on the contrary, the best readers exercise the longest prevision. But they look onward in order to catch the relations of clauses and sentences, and to regulate their utterance accordingly. The anticipatory effect which we condemn has no connexion with regulated expressiveness: it is indiscriminating, and is governed not by *ideas*, but by *words*.

and all impediments and defects of speech are, from the same cause, almost invariably aggravated at public schools. Quickness of utterance being the quality most prized by mistaken schoolmasters, the thoughtful boy, who is often shy, and who is generally of better parts than the pert, guessing lads, that are always first with their answers, has no chance; and in his efforts to expedite his thoughts, he confuses them, or they come faster than his tongue can utter them, so that jumbling rapidity, inarticulate hurry, stuttering, or convulsive impediment, is very naturally created.

Expressive inflexion prevents hurry, and favours distinctness of articulation; it may, besides, be made an index of mental advancement, and used with much advantage to taste, as an instrument of mental cultivation. If words are enunciated without inflexion, they must be in *monotone* and SING.

Let, then, every teacher of youth take this fundamental axiom of speaking tones into ordinary class application:—All words, whether pronounced in a high or low, loud or soft tone; whether uttered swiftly or slowly, forcibly or feebly, with passion or without it, must necessarily be pronounced with *inflexion*, that is, with the voice *sliding either upwards or downwards*.

Let this one principle be systematically enforced in every school, and the monotony, drawling, screaming, and sing-song that are now so common, will be at once banished from the class-room,—and, through it, from the pulpits, the courts, and from every arena of oratory; from all but, perhaps, the mimic stage; which might shake the sides of the next-risen generation by imitating the grave chanting of a bygone age.

MODULATION, ETC.

Modulation has reference to the prevailing pitch of the inflexions in a sentence, and the key-notes, as it were, of periods or clauses. Thus, a passage may be modulated in a high or low key, without at all affecting the direction or the extent of its inflexions.

A change of modulation is always necessary at any change in the style of composition—as from Narration to Description, or from Literal to Figurative Language, and *vice versa*; to express feeling and changes of sentiment; to distinguish what has been previously expressed or implied, or what is merely expletive, from what is new and emphatic to the sense; to detach from the main body of the sentence words or clauses which are explanatory or parenthetical; and to distinguish generally those parts of a sentence which are necessary to its construction from those that are subordinate and dispensable.

The degree in which the Modulation is changed, and even the direction of the change,—whether to a higher or lower key,—must depend on the reader's judgement, taste, temperament, etc.

No exercise will be found more improving to the style of reading than the distinguishing,—by changes of Modulation,—the principal from the subordinate words in a sentence; the *subjective* and the *predicative* clauses from the mass of inferior clauses, and of relative, adverbial, or parenthetical sentences in which they are often found embedded. These necessary component members of every sentence should be so delivered as to strike upon the hearer's mind with unencumbered distinctness among the most multitudinous assemblage of particulars. The *Subject* and *Predicate* are generally the most emphatic

parts of a sentence : they are so always, indeed, except when either of them has been previously expressed or implied ; or when some opposition or contrast of particulars or subordinate clauses requires the elevation of such inferior words.

The same principle which dictates variety of Modulation, requires also a corresponding variety in the Force, Time, and general Expressive Manner of Utterance. The modification of the various qualities of style is greatly dependent on the reader's sympathetic appreciation of sentiment, situation, etc. No unvarying uniformity in any particular of delivery can be effective ; for it is unnatural.

[For Tables of Inflexion, Modulation, Force, Time, and Expression, with Practical Exercises, see the "Principles of Elocution," or the "Standard Elocutionist."]

[In the preceding portion of this Work, the Theory of Vowel and Articulate Formations has been developed. In the Practical Observations that follow, minute directions will be found for the attainment of Distinctness and Accuracy of Pronunciation, the Correction of Provincialisms, and the Removal of Stammering and other Individual Peculiarities, Faults, and Impediments of Utterance.]

[END OF PART FIRST.]

VOCAL PHYSIOLOGY

Part Second

DICTIONARY OF ENGLISH SOUNDS

Part Second.

DICTIONARY OF ENGLISH SOUNDS.

SECTION FIRST.—VOWELS.

THE following Table shows the order in which the Vowels are treated of in the succeeding Dictionary of Sounds. Under each element instances are collected of words that, to avoid ambiguity, depend on exactitude in the pronunciation of their unaccented syllables. The perfect preservation of all vowel differences in unaccented syllables furnishes the best criterion of a cultivated pronunciation.

ENGLISH MONOPHTHONGS AND DIPHTHONGS.

Vowel.	
1	as in <i>educe</i> , <i>expedient</i> , <i>bee</i> .
2	" <i>impose</i> , <i>differ</i> , <i>verily</i> .
3	" <i>mediate</i> , <i>ague</i> , <i>gay</i> .
4 { (short,) }	" <i>embrace</i> , <i>embers</i> , <i>end</i> .
{ (long,) }	" <i>erewhile</i> , <i>vary</i> , <i>fair</i> .
5	" <i>admire</i> , <i>admiral</i> , <i>act</i> .
6	" <i>arouse</i> , <i>sofa</i> , <i>bath</i> .
7	" <i>partake</i> , <i>pardon</i> , <i>papa</i> .
7-1	" <i>idea</i> , <i>mindful</i> , <i>sky</i> .
7-13	" <i>however</i> , <i>doubtful</i> , <i>how</i> .
8	" <i>herbaceous</i> , <i>martyr</i> , <i>sir</i> .
9 { (short,) }	" <i>supply</i> , <i>cudgel</i> , <i>cut</i> .
{ (long,) }	" <i>curtail</i> , <i>curtain</i> , <i>hurt</i> .
10 { (short,) }	" <i>obtain</i> , <i>dogma</i> , <i>on</i> .
{ (long,) }	" <i>austere</i> , <i>auction</i> , <i>all</i> .
10-1	" <i>envoy</i> , <i>boil</i> , <i>boy</i> .
11	" <i>portray</i> , <i>afford</i> , <i>pour</i> .
12	" <i>omit</i> , <i>motion</i> , <i>slow</i> .
13 { (short,) }	" <i>together</i> , <i>footman</i> , <i>should</i> .
{ (long,) }	" <i>issue</i> , <i>ruthless</i> , <i>ooze</i> .

The English Vowel Letters, A, E, I, O, U, have each two regular sounds; the first sound corresponding with the alphabetic name of the letter, heard when the vowel is final in a syllable, as in *ma*, *me*, *mi*, *mo*, *mu*; the second heard when the syllable ends in an articulation, as in *am*, *em*, *im*, *om*, *um*.

These ten sounds correspond respectively with the following in our numerical arrangement (page 36):

ā in <i>ma</i> = No. 3 (ale).	ā in <i>am</i> = No. 5 (an).
ē " <i>me</i> = " 1 (eel).	ē " <i>em</i> = " 4 short (ell).
ī " <i>mi</i> = " 7-1 (isle).	ī " <i>im</i> = " 2 (ill).
ō " <i>mo</i> = " 12 (old).	ō " <i>om</i> = " 10 short (on).
ū " <i>mu</i> = " y.13 (use).	ū " <i>um</i> = " 9 " (up).

Of the remaining vowel sounds in the Numerical Table,

No. 6 is generally represented by <i>a</i> before <i>ss</i> , <i>st</i> , <i>th</i> , etc.	
" 7 " "	<i>a</i> before <i>r</i> final.
" 13 " "	<i>oo</i> ; or by <i>u</i> after <i>j</i> , <i>l</i> , or <i>r</i> .
" 10 (long) "	<i>a</i> after <i>w</i> , or by <i>aw</i> .
" 7-13 " "	<i>ou</i> or <i>ow</i> .
" 10-1 " "	<i>oi</i> or <i>oy</i> .
" 8 " "	<i>e</i> , <i>i</i> , or <i>y</i> before <i>r</i> final; or by <i>r</i> after any long vowel.
" 11 is the English form of <i>ō</i> before R.	
" 4 (long) " "	ā before R.
" 9 (long) " "	ū before R final, or followed by any articulation.

Of the vowels in the English Numerical Scheme (p. 36),

Nos. 1, 3, 6, 7, 8, 11, 12, y.13, are always <i>long</i> .	
" 2, 5, "	" <i>short</i> .
" 10, 13, "	" <i>variable</i> .
" 4, 9, are long only before R.	

FIRST VOWEL—as in *eel*.

This is the alphabetic sound of E in English, and of I in the French and other continental tongues. It is the *closest* of the *Lingual* Vowels. In its formation, the

tongue rises convexly within the arch of the palate, and presses laterally against the palate and back teeth, leaving only a very narrow aperture for the voice, between the middle of the tongue and the palate.

A very common fault in the formation of this vowel consists in the depression of the *point of the tongue* to the *lower teeth*—a position which, besides being injurious to the quality of the vowel, is unfavourable to the action of the tongue for many of the Articulations. The tongue must be *kept back*, and its point directed horizontally, to guide the sound out of the mouth without striking the teeth. The teeth must, of course, be sufficiently apart: they should, for no vowel, have a less opening than a quarter or a third of an inch.

Many persons fail to pronounce this vowel with purity, when it is under emphasis, especially when final; as in “to be or not to be,” “me miserable,” “they shall be free,” “to sleep, perchance to dream.” The breath is heard rustling *in the mouth*, from too close organic approximation. To correct this, pronounce words ending with e (1), as agree, trustee, glee, etc., and *dwell on the vowel* for some time, observing that the tongue is kept perfectly still until the sound is finished in the glottis.

In Scotland this vowel is generally *deficient in openness* and *quantity*; the e in meet, mean, etc., being sounded as abruptly as that in mechanic. In many districts the 3d vowel (but very short, and without the English diphthongal termination) is substituted for the 1st; thus, meal, steal, deal, etc., are pronounced mäle, stäle, däle, etc. This peculiarity seems to be almost confined to words spelled with ea.

A similar exchange of vowels takes place in Ireland; but such words as sweet, chief, scheme, etc., where the sound

is variously represented, partake of the peculiarity. The Irish sound is more open and prolonged than the Scotch; and its vocality is less pure, being mixed with the articulative Aspiration which is characteristic of the Irish dialect.

Vowel 1 is seldom exactly sounded in an unaccented syllable immediately *after the accent*, as in *appetite*, *antithesis*, *penetrate*, etc. In such cases the more open and easier form of the 2nd Vowel is substituted. *Before the accent*, however, as in *edition*, *beseech*, *precocious*, *return*, etc., the 1st formation should be carefully preserved.

The combination of e (1) with R gives the diphthong 1-8. The omission of the 8th vowel from such words as *ear*, *here*, *cheer*, etc., is a Scotticism. There is, besides, a harshness in the junction of e (1) with the articulative effect of R, which is gracefully avoided by the interposition of the open element always heard in English.

Care must be taken to avoid the intervention of any similar sound between e (1) and L or N. The habit of inserting another vowel in this situation prevails in Scotland; but these articulations must be directly joined to the simple and unchanged vowel.

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

ablegate	deviser	elide	emission
abligate	divisor	allied	immission
allegation	diesis	elude	enate
alligation	diocese	illude	innate
decertation	elaborate	elusion	enumerate
dissertation	illaborate	illusion	annumerate
deduction	elapse	emaculate	eradiate
diduction	illapse	immaculate	irradiate
deform	elation	emerge	eruption
difform	illation	immerge	irruption
descent	elicit	emersion	legation
dissent	illicit	immersion	ligation

WORDS OF THE SAME PRONUNCIATION BUT DIFFERENT
ORTHOGRAPHY.

be	demean	lee	seem
bee	desmene	lea	seam
beach	discreet	mean	see
beech	discrete	mien	sea
beat	feat	mete	seed
beet	feet	meat	cede
		meet	
beer	fees	need	sweet
bier	feaze	knead	suite
ceiling	flee	peace	sheer
sealing	flea	piece	shear
cere	freeze	peek	teem
sear	frieze	pique	team
seer			
chagrin	here	peal	tear
shagreen	hear	peel	tier
creak	key	peer	weak
creek	quay	pier	week
crease	kneel	please	weal
creese	neal	pleas	we'll
dear	leak	queen	weald
deer	leek	quean	wield
deem	least	read	
disme	leased	reed	

SECOND VOWEL—as in *ill*.

This sound is of very frequent occurrence in English, and is comparatively little used in other modern languages. It has been generally reckoned—but erroneously—the short form of the 1st vowel. The shortest utterance of *e* (1) is a distinctly different sound from vowel 2, which, as its position in our Table indicates (p. 26), is a formation intermediate to *e* (1) and *a* (3); the tongue, from its position at *e* (1) being depressed about half way to its position for *a* (3).

There is no longer form of this vowel in English, than that in the word *hinge* ; but the prolongation of the sound is of course quite practicable.

The 2d vowel is not heard in English before R, final or followed by any articulation ; in these cases, the 8th vowel is substituted. When the R is followed by *another vowel*, as in *miracle*, *mirror*, etc., the letter *i* retains the sound of the 2d vowel,—as before other articulations.

In Scotland, we hear, instead of this vowel, a peculiar and more open sound, nearly approaching to that of the 4th English Vowel, being a formation intermediate to the 3d and 4th. This will be found noted in our General Scheme, (page 26), as the 4th of the Lingual series.

Among Northern speakers, ambitious of an English enunciation, but who have been taught to believe that the vowels *ee* (1) and *i* (11) are identical in formation, we frequently hear the 1st instead of the 2d vowel, as in *vision*, *condition*, *suspicion*, etc., pronounced *veesion*, *condection*, *suspeecion*, etc. This need not any longer be a mark of Northern English, for there is no difficulty in producing the true sound of the English element when its formation is understood.

The 2d vowel is common enough in Scotch, under another form. It is heard instead of the short sound of the French *û* (the 3d *Labio-lingual vowel*), which is vernacular in Scotland. Thus the word *gude* (good), is in many districts pronounced exactly like the first syllable in *giddy* ; and, where this custom prevails, we hear the sound opened into an *a* (3) in long syllables, as in *do*, pronounced *dā* (3, without the English diphthongal quality) ; thus practically illustrating and corroborating the remark at page 28, on the tendency of *i* (2) to be lengthened into *a* (3) rather than into *e* (1). We have, besides, numerous

instances in English of *a* (3) being shortened into *i* (2), as in the final syllables of *carriage*, *marriage*, *cabbage*, *orange*, etc., pronounced *carridge*, *oringe*, etc.

In the Irish dialects we hear *i* (2) opened into *a* (3) and sometimes into the proximate Scotch vowel noticed above. Thus, *ill* is by Irish speakers pronounced nearly like *ale*, *his* nearly like *haze*, *forgive* nearly like *forgave*, etc.

In the unaccented terminations, *il*, *in*, *ive*, etc., we generally hear element 9 in Ireland; as in *peril*, *motive*, *genuine*, etc., which are pronounced as if spelled *perul*, *motuv*, *genuun*, etc. Another Irish peculiarity is to sound *Y* final, unaccented, like *e* (1) instead of *i* (2), as in *pretty*, *many*, etc., pronounced *prettee*, *manee*, etc.

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

analysis	germin	passible	subtile
analyses	German	passable	subtle (<i>pr</i> <i>suttle</i>)
aspirate	idyl	rabbit	surplice
asperate	idle	rabbet	surplus

WORDS OF THE SAME PRONUNCIATION BUT DIFFERENT ORTHOGRAPHY.

build	cliff	gild	signet
billed	clef	guild	cygnet
candid	empirical	links	tint
candied	empyrical	lynx	teint

THIRD VOWEL—as in *ale*.

The depression of the tongue to a position as much more open than that of *i* (2) as the latter is more open than *e* (1), produces the vowel which is the alphabetic sound of *E* in French, German, etc. This sound is not heard singly in English, but is always diphthongally tapered into, or towards, the closest lingual vowel *ee*. The omission of this diphthongal termination is a marked

provincialism, and is one of the leading features of the Scottish dialect, in which the monophthongal A is a very common vowel. When the English A (=a-e) occurs before a voiceless articulation, the second sound (e) is so abrupt, and so blended with the radical a, as to be with difficulty distinguished by the unpractised ear; but the contrasted utterance of such words as *mate*, *cape*, *lake*, etc., as pronounced by an Englishman and a Scotchman, will show that even in the shortest utterance of this vowel the two elements are really present in English pronunciation. When the 3d vowel is final, or before voice articulations, its compound quality will be unmistakeably manifested.

The English custom of making this vowel a diphthong is very apt to throw the radical part of the sound into a too open position, so that we often hear 4-1 instead of 3-1, from careless speakers; as *dehy*, *lehy*, etc., instead of *day*, *lay*, etc.

The 3d vowel is never heard before R in the same syllable. R, which has the sound of the 8th vowel, could not follow the close finish of the English a without creating a new syllable; and therefore a more open vowel which readily blends with the 8th is substituted; as in *air*, *care*, etc., pronounced *eh-ir*, *keh-ir*, etc.

The Scotch a, being a monophthong, unites with R in the same syllable, and therefore is retained in those words which in English have the more open sound (4); so that there is a very marked difference betwixt the English and the Scotch pronunciations of such words as *air*, *care*, *pear*, *heir*, etc., (see R, and 8th vowel).

In Scotland the 3d vowel is used in many words instead of the English 12th; as in *stone*, *bone*, *alone*, etc., pronounced *stāne*, *bāne*, *alāne*, etc. This is another

indication of the analogy between *a* (3) and *o* (12), which has been noticed at page 93.

From the diphthongal nature of the 3d vowel it is comparatively seldom heard fully in unaccented syllables. In the terminations *age*, *ace*., *ain*, etc., the 2d vowel is generally substituted; but in deliberate speaking, the 3d would not be pedantic, and is often heard, especially in such words as *dotage*, *herbage*, *mortgage*, etc., where the preceding syllable is long. In the termination *ate*, as in *dedicate*, *estimate*, etc., the colloquial tendency is to open the vowel to *et* (4); but the 3d element is uniformly heard from good speakers.

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

gayer	mayor	prayer*	swayer
gare	mare	prayer	swear
layer*	payer	stayer	weigher
lair	pair	stair	wear

WORDS OF THE SAME PRONUNCIATION BUT DIFFERENT ORTHOGRAPHY.

ale	gate	phrase	stade
ail	gait	frays	staid
bale	grate	place	stayed
bail	great	plaice	tale
bay	hale	plane	tail
Bey	hail	plain	tray
braid	lade	plate	trey
brayed	laid	plait	vale
break	lane	pray	vail
brake	lain	prey	veil
clamant	made	prays	vane
claimant	maid	praise	vain
			vein

* In *bricklayer*, *stage-player*, *rate-payer*, etc., when *layer*, *payer*, etc., are unaccented, the monosyllabic form 4.8 is generally heard; but when these or similar words are emphatic, as in the sentence "*a good worker makes the best player*," the dissyllabic form 3.1.8 should be preserved. So in *pray-er* (one who prays) which is thus distinguished from *prayer* (a petition.) The former is a dissyllable, the latter a monosyllable.

day	male	rain	wane
Dey	mail	rein	wain
Dane	mane	reign	waste
deign	main	raze	waist
fane	maze	rays	wave
feign	maize	raise	waive
faint	nay	sail	way
feint	neigh	sale	weigh
gage	pane	stake	
gauge	pain	steak	

FOURTH VOWEL—as in *ell, ere*.

In forming this sound, the oral channel is enlarged by the depression of the fore-part of the tongue, from its position at *a* (3), about as much as it was increased from *ee* to *a*. This formation is one of the cardinal points in the vowel scale, being about midway between the closest and most open formations *ee* (1) and *ah* (7); the vowel is one of the commonest in all languages. It is the sound uttered by the sheep in bleating.

A vowel intermediate to this and the preceding formation is heard in Scotland, as the vernacular sound of *i*, in *ill, in, it*, etc. (G. V. S. p. 26). This is one of the most common vowels in the Scottish dialect; it is heard instead of the English 4th in *cherry, merry*, etc.; instead of the 8th in *her, sir*, etc.; the 9th in *does*, etc.; the 13th in *put, foot*, etc.; combined with *ee*, it makes the Scottish form of the English diphthong 7-1, as in *ay, child, idle, mine*, etc.; and it is heard, besides, in numerous unaccented syllables.

The organic change from the 4th vowel to the succeeding formation is comparatively minute; and consequently the sounds 4 and 5 are liable to be confounded. The English long form of vowel 4 (heard only before R) often verges on 5; and in Scotland the short form is

characteristically subject to the same change; *perish*, being pronounced almost like the English *parish*, very like *varry*, *heaven*, like *hav'n*, etc. In some districts, or in some words, the converse of this change takes place, and we hear *kerrier* for *carrier*, *merry* for *marry*, etc.

A peculiarity similar to the former occurs in the northern dialects of Ireland, in which such words as *men*, *pen*, *bed*, etc., are pronounced nearly like *man*, *pan*, *bad*, etc.

The *long form* of the 4th vowel—identical with the French *ê* in *même*, *bête*, etc.—is the sound which is substituted for A (3) before R (8) in English. It is heard in no other position in the language. In Scotland this sound is common as a substitute for the English diphthong 7-1, when final, as in *eye*, *high*, *buy*, *my*, *try*, etc. The same vowel is also heard instead of A (3) in emphatic or strongly accented syllables; as, *I say*, *away!* *admiration*, etc., pronounced I *SEH*, *aweEH!* *admireEHtion*, etc.

An ear unaccustomed to analyze vocal sounds may possibly, at first, fail to recognize the same vowel formation in the words *ell* and *ere*, arising from its combination in the latter word with the open R (8); but close observation and careful experiment will satisfy the demurring ear of the correctness of the classification. When we find all our orthoepists at fault with this sound,—and see even Mr. Walker, in his laborious analysis of the principles of our language, omitting to notice this lengthened sound of *eh* (4); nay, asserting that *ea* in *bear*, *e* in *there*, etc., are the same in vowel quality as *a* in *trade*, *ai* in *pain*, etc., we cannot expect our assertion of the difference of these sounds to be received without question. It is, however, certain that all English speakers at the present day do make a difference in the sound of *a* as in *care* and in *cane*; and there can be little doubt that Mr. Walker must have

made a correspondent distinction between them in his own *practice*, or else the very obvious difference now general in England must have grown with marvellous rapidity and obstinacy, at variance as it is with the theories of orthoepists. Mr. Walker had probably failed to discriminate these sounds, on account of early associations; for in Scotland the *e* in *there* and *a* in *trade* are identical. To the qualified ear we appeal to corroborate our well tested conclusion, that the *a* in *vary* and *e* in *very* are *identical* in *quality*, and different only in quantity or fulness; just as the long sounds in *yawn* and *pool* are—confessedly by all orthoepists—the same in quality with the short ones in *yon* and *pull*.

The combination of this long vowel with R, it must be remembered, constitutes a diphthong, viz., 4-8. Thus :

$\begin{matrix} 4 & 8 \\ \text{pa-ir,} \end{matrix}$
 $\begin{matrix} 4 & 8 \\ \text{be-ar,} \end{matrix}$
 $\begin{matrix} 4 & 8 \\ \text{sha-re,} \end{matrix}$
 $\begin{matrix} 4 & 8 & 2 \\ \text{va-r-y*} \end{matrix}$

Let the reader pronounce the first word of each of the following pairs, *omitting* the vowel-sound of the *r* and joining the *articulative* effect of R to the preceding vowel, and his pronunciations should correspond to the second words: or conversely, let him pronounce the second word in each pair, *with the interposition* of the vowel-sound of R between the articulate R and the preceding vowel, and his utterances should give the first words.

fairy. . . ferry.	chary. . . cherry.	dairy. . . Derry.	
vary. . . very.	Mary. . . merry.	airing . . erring.	

But it is not every ear that will be at once competent for this experiment. We see every day how difficult it is for unpracticed organs to analyze even the simplest words into their elementary sounds; and how hard it

* In all words which contain R after a long vowel and followed by another vowel, the R has both its vowel and articulate sounds. The pronunciation of *vary* is thus, veh-ir-y.

sometimes is to get the judgment to assent to the correctness of what seems so strange and peculiar as the separate utterance of the elements of language. The ear requires peculiar training, as well as natural acuteness, to catch and distinguish the transient shades of vocal sound with accuracy. Even excellence in utterance or in the practice of music, would appear to be no certain qualification for this peculiar province of the critical ear. Thus Mr. Rice, in his *Art of Reading*, wishing to prove the untenable assertion, that speaking sounds do not range between tones of various acuteness or gravity, but differ only in force or intensity, like the notes of a drum,—says, “That I might not be mistaken, however, myself, in this particular, I repeated at different times several passages from Milton and other poets in the hearing of one of the greatest masters in that science (Music), who, after paying the utmost attention to the several articulate sounds in each sentence, declared them to be all of the same tone!” No fact in the science of speech is better established than that all speaking sounds partake of an upward or downward movement—called an *inflection*—of the voice; and that, consequently, there is not a sameness of tone throughout any correctly-delivered articulate sound; but here, were a Professor of the Art of Speech, and “one of the greatest Masters in Music,” deceived in that particular.

We cannot, therefore, wonder if critics, less apparently qualified than these professional Masters of Sound, should be unable—or unwilling, against general theoretic authority—to corroborate by accurate experiment *our* Vowel-Theory and classification. Accustomed to a false scheme of representative letters, few persons find it easy to examine sounds by the ear alone, irrespective of their signs; but this must be done by the philosophical student of speech.

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

Abel	element	evocation	pendent (a.)
able	aliment	avocation	pendant (s.)
adept	elocution	except	read (part.)
adapt	allocution	accept	read (infin.)
cornet	enallage	fellow	terrace
cornate	analogy	fallow	tarrass
delectation	ereption	hermetical	terrier
delactation	eruption	hermitical	tarrier
effect	erogate	magnet	travel
affect	arrogate	magnate	travail
effluent	essay (v.)	palette	whether
affluent	assay	palate	whither

WORDS OF THE SAME PRONUNCIATION, BUT DIFFERENT ORTHOGRAPHY.

Ayr	bare	knare	fair	hare	pair	stair	tare
air	bear	ne'er	fare	hair	pare	stare	tear
ere					pear		
e'er	there	ware	glare	berry	bread	breast	read
eyre	their	wear	glaire	bury	bred	Brest	red
heir		lead			whether		
		led			wether		

FIFTH VOWEL—as in *an*.

The formation of this vowel is slightly more open than that of the preceding sound. The enlargement of the formative aperture is caused by the depression of the *middle of the tongue backwards*. The vowels from *ee* (1) to *eh* (4) are produced by depressions of the *fore-part*, while the middle or back of the tongue remains elevated; those from *eh* (4) to *ah* (7) bring down the middle of the tongue, and so evenly enlarge the whole cavity of the mouth.

The tendency to interchange the vowels 4 and 5 has been noticed under the former of these. In Scotland, the 4th sound is commonly heard in the first efforts to acquire

the peculiar English formation 5, which the unaccustomed organs do not readily take with precision. Affected speakers in England pronounce 4 instead of 5, as—"The ettitudes were admirable." In some words this change is established by almost universal custom; as in *any*, *many*, pronounced *enny*, *menny*.

The 5th vowel, when initial, is liable to be confounded with the 6th in the article *a*, as in

arrode	attest	appeal	accustom
a road	a test	a peal	a custom, etc.

There is a shade of difference in the articulation as well as in the vowel-sound of these combinations, though the distinction is not generally attended to.

In Scotland, the 5th vowel is seldom heard; the usual pronunciation of all words with that element in English, being a short sound of *a*, as in *are* (7). Thus the verb *tarry* has in Scotland the same sound as the adjective *tarry* in England—but more abrupt; *cap* has a short sound of *ca(r)p*, *back* of *ba(r)k*, etc.

In Ireland, the 5th vowel is used regularly instead of the 6th, as in *pass*, *bath*, *after*, *ask*, etc., and even instead of the 7th, in the words *papa* and *mamma*, which are pronounced with the 5th element *long* in the final syllable.

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

accite	appose	coral	matrass
excite	oppose	corol	mattress
allective	apposite	cymbal	metal
elective	opposite	symbol	mettle
allude	bridal	feracity	missal
illude	bridle	ferocity	missile
alogy	carat	leman	principal
elogy	carrot	lemon	principle.
elegy			

WORDS OF THE SAME PRONUNCIATION BUT DIFFERENT
ORTHOGRAPHY.bad
badeadds
adzeSIXTH VOWEL—as in *ask*.

Usage is considerably divided in England with respect to the pronunciation of some words ending in *and*, *aunt*, *ath*, *ass*, *ast*, *ask*, etc.; some speakers give them the open sound of *ah*, while others pronounce them with the 5th vowel. With reference to the more open sound in these cases, Mr. Walker has remarked,—“This pronunciation of *a* seems to have been for some years advancing to the short sound of this letter, as heard in *hand*, *land*, *grand*, etc.; and pronouncing the *a* in *after*, *answer*, *basket*, *plant*, *mast*, etc., as long as in *half*, *calf*, etc., borders very closely on vulgarity.” But between *a(t)* and *a(re)* there is a great organic difference, sufficient to admit of at least one distinctly intermediate sound; and such a sound is undoubtedly the most common variety of vowel-quality heard in these irregular cases. The extreme pronunciations 5 and 7 are at the present day comparatively rare. The precise quality of the prevailing intermediate sound cannot be correctly noted; for it ranges among different speakers through every practicable shade of sound within these limits. But the recognition of a middle sound may give us more uniformity in its employment.

Speaking of this sound (intermediate to vowels 5 and 7), Mr. Walker remarks: “As every correct ear would be disgusted at giving the *a* in such words as *past*, *last*, *chance*, etc., the full sound of *a* in *father*, any middle sound ought to be discountenanced, as tending to render the pronunciation of a language obscure and indefinite.” The

theoretical discountenancing of any sound in general use has undoubtedly this tendency; but the classification of all varieties of sound distinguishable in common usage must have the opposite effect, and tend to remove obscurity and indefiniteness. The vowel noted as the 6th in our scale is unquestionably in our mouths every day, and it must therefore find a place in the catalogue of our vocal elements.

This variableness of vowel quality is not observable in all words containing the combinations in which No. 6 occurs. We never hear *band*, *gas*, *hath*, etc., with No. 7, but uniformly with No. 5.

In the Scottish dialects we hear in some the 4th, and in others the 7th, instead of the English 6th vowel. Thus *grass*, *brass*, etc., are generally pronounced *gress*, *brass*, etc., and *bath*, *dance*, etc., *bahth*, *dahnce*, etc. (short).

Unaccented *a* in the syllable immediately preceding the accent, as in *abolish*, *alacrity*, *bazaar*, etc., has the sound of the 6th vowel. Among careless speakers, the sound of this pre-accented *a* obscurely ranges through many shades of open sound from 5 to 9.

The unaccented final *a* in *comma*, *sofa*, *villa*, etc., has always a more open sound than that of the *a* in *fat*, which is assigned to it by Mr. Walker; but its sound is less open than that of the *a* in *far*. In such words, we have instances of the 6th element. In Scotland, the *a* in this situation is closed into a (3) or even into i (2); thus, *sofa* is pronounced as if written *sofay*, or sometimes *sofy*.

In words ending in *nce* and *nt*, custom wavers between the 5th and 6th vowels, as in *dance*, *glance*, *chance*; *grant*, *plant*, *slant*, etc. In words spelled with *au* before *nt*, we generally hear the 6th, or even the 7th, as in *aunt*, *gaunt*, *flaunt*, *taunt*, etc.

The Article *a* generally has the 6th sound; though some speakers use the alphabetic vowel *ā* (3).

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

abrade	avert	foremast	passable	aunt	can't	khan
upbraid	evert	foremost	passible	ant	cant	can

SEVENTH VOWEL—as in *ah*.

This Vowel, which is often called the open *Italian A*, is formed with the lips drawn back, the teeth considerably separated, and the tongue evenly depressed, so as to spread the sound in the mouth, and direct it in a broad current out of the expanded oral aperture. The slightest alteration in the position of the tongue or the lips will affect the quality of the sound; and thus, though this element is very common in all languages, there are often minute differences, which give it a distinct character.

Habits of oral action—such as pouting the lips, keeping them close at the corners, allowing them to cover the teeth, etc.,—influence all the vowels,—the *open* ones especially; so that this, the most open sound, is peculiarly liable to be faultily affected. The correct speaker cannot be the slave of any habit of this kind. His lips and tongue must be pliable and plastic, and their action light and agile, that the most minute and momentary movements, either for articulation or emotional expression, may be performed with facility.

In English the 7th Vowel occurs chiefly before *R* final, or followed by an articulation; but it is heard almost uniformly before *lve*, and *lm* (*l* not sounded), as in *halve*, *calve*, *palm*, *calm*, *alms*, etc. Before *lf*, as in *calf*, *half*, etc.; and in *laugh*, *haunt*, etc., the less open sound of the preceding vowel, (6) is frequently heard.

In words spelled with *au* before *n* (except *vaunt* [10]) good usage is pretty equally divided between the 7th and the 6th vowels.

The 7th vowel is *never short* in English. In Scotland we hear an abrupt form of it in words which in English have the 5th and 6th sounds, as in *man*, *mask*, etc.; but we comparatively seldom find the 7th vowel sounded in words which have that sound in English. Thus, *bar*, *jar*, *star*, *calm*, *palm*, *father*, etc., are generally pronounced almost as if spelled *bawr*, *cawn*, *faurther*, etc.; *farm*, *heart*, *alarm*, etc., are very commonly pronounced with the 4th vowel *feh-rm*, *heh-rt*, etc.; and *guard*, *serjeant*, *large*, etc., as regularly take the sound of the 3d vowel (monophthongal), and are pronounced as if written *gayrd*, *sayrjeant* *layrge*, etc.

The combination of the 7th vowel with R forms the diphthong 7-8, though, from the slight difference in the vowel quality of these elements, the diphthongal effect is not very obvious. The comparison, however, of such words as *arm* and *alm*, *barm* and *balm*, *carve* and *calve*, *farther* and *father*, will sufficiently prove the diphthongal quality.

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

altar	collar	lumbar	balm
alter	choler	lumber	barm
psalm	alms	calve	
Sam	arms	carve	

DIPHTHONG 7-1—as in *isle*.

This combination is the alphabetical sound of the letter I in English, and a very common element of speech. The first part of the diphthong is liable to considerable dialectic and individual modification, as are all the *open formations*,

—5, 6, 8, 9, etc.; but the combination of the *extremes* of the *vowel scale*,—7-1=ah-ee,—is generally recognized as the correct English diphthong. The most usual departure from this in England is to 6-1.

In Mr. Knowles's dictionary this diphthong is analyzed into 10-1, which, however, confounds it with another diphthong,—as in *isle* and *oil*,—from which that author makes it differ only in some ill-defined abruptness of maxillary action. The student has but to blend the most open sound he habitually makes in such words as *far*, *papa*, *palm*, etc., with the 1st Vowel, to produce that form of this diphthong which suits his habit of speech; but, if he open his ears to the utterance of educated Englishmen, free from peculiarities of oral action, he will find that the radical part of the diphthong is nothing short of the open *ah*. It must be remembered, however, that the sound is necessarily more abrupt than in the separate or interjectional utterance of that vowel. (See page 88.)

There is a tendency in all diphthongs, in careless utterance, to slide into a sound intermediate to their component elements. Thus, we often hear the 5th or even the 4th vowel substituted for 7-1. In Scotland especially, this is common: the almost regular utterance of this English diphthong, when *final*, being vowel 4 or 5, as in *I*, *eye*, *my*, *buy*, etc., pronounced *eh*, *meh*, *beh*, etc. Sometimes the same sound is used before R; and *fire*, *wire*, etc., are pronounced *fehr*, *wehr*, etc. When the vowel is in other situations, as in *night*, *idle*, *crime*, *wild*, etc., a diphthong is compounded of the peculiar Scotch vowel (4th Lingual, G. V. S. page 26) with the 1st vowel. This combination is heard, independently, in the Scotch pronunciation of the word *aye*; also in *pay*, *Tay*, etc., and frequently otherwise instead of vowel 3; probably from the same

tendency that opens the radical part of the latter vowel to 4, in English mouths. .

In Ireland the general form of the English long ī (7-1) is 9-1, or even 10-1, abruptly uttered; which has doubtless led Mr. Knowles to set down 10-1 as the formation of the English diphthong.

The letter R, always having a vowel sound in itself, when it follows a long vowel, forms, in combination with this diphthong, a triphthong, the elements of which are 7-1-8, as in *fire*, *wire*, *higher*, etc. These words are sometimes reckoned dissyllables and sometimes monosyllables: when fully pronounced they are undoubtedly dissyllables; but colloquially the middle element is often slurred over, or opened to vowel 3rd or 4, so as to remove or lessen the dissyllabic effect.

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

lyre	line	quite	right	sign	vile
liar	lion	quiet	riot	scion	viol

WORDS OF THE SAME PRONUNCIATION BUT DIFFERENT ORTHOGRAPHY.

died	lier	rime	right	side	sight	sign	tide	time
dyed	lyre	rhyme	rite	sighed	site	sine	tied	thyme

DIPHTHONG 7-13—as in *owl*.

This diphthong, which blends the extremes of the vowel scale, *on the labial side*, as the preceding diphthong does those on the lingual side, is a very common element of language. Its radical part is liable to fluctuations of the same nature as those to which that of the preceding diphthong is subject. The most usual English deviations from 7-13, are to 5-13, or 6-13, though we sometimes hear 8-13. In Scotland, the general pronunciation of this diphthong is 9-13. In Ireland it is 10-13.

This diphthong forms one of the characteristics of American pronunciation. The first element is rarely made more open than 5, often not more than 4; and the radical vowel is long, and in general strongly nasal.

When the diphthong 7-13 occurs before R, the triphthong 7-13-8 is formed as in *our*, *sour*, *power*, etc.; words the full utterance of which is dissyllabic; but colloquially the middle element is often slurred over, or opened to 10 or 11 to remove or lessen the dissyllabic effect.

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

bow (of a ship)	lower (to darken)	slough (7-13)
bow (window)	lower (adj.)	slough (uff)
sow (swine)	wound (part.)	
sow (v.)	wound (n.)	

WORDS OF THE SAME PRONUNCIATION BUT DIFFERENT ORTHOGRAPHY.

bough	our
bow (salute)	hour

EIGHTH VOWEL—as in *err*.

This is a characteristically *English* vowel. Its position in the General Scheme (page 26) indicates its exact formation. It is intermediate to *ah* and the French sound *eu*; seeming to the attentive ear to partake of the quality of both sounds, and to be thus analogous to the tint produced by the amalgamation of two shades of colour. As the colour varies with the varying proportions of its elements, so this vowel, among different speakers and in different dialects, partakes in a greater or less degree of the *ah* or the *eu*. In London, it is often heard as open as *ah* (but this is a vulgarity), as in *sarve* for *serve*, *sar* for *sir*, etc., and, in some of the English provinces, it is pronounced

almost identically with the French sound, as in *sœur* for *sir*, *peur* (*fect*) for *per* (*fect*), etc.

The sound of this element differs but slightly from that of vowel 9 (*up*, *urn*); but the difference, though not strongly marked, is clearly appreciable; and the distinction between such words as *fur* and *fir*, *urn* and *earn*, should always be preserved.

“ John’s wife and John were tête-à-tête ;
 She witty was, industrious he ;
 Says John, ‘ I’ve *earned* the bread we’ve ate,’
 ‘ And I,’ says she, ‘ have *urned* the tea.’ ”

The changes which take place in the organic arrangement for vowels of this open class are not all within reach of observation. The vocal passage is modified by the root of the tongue, and the parts immediately above the larynx. The visible difference between the formations 8 and 9 is a *slight* elevation of the forepart of the tongue which directs the voice against the palate somewhat farther forward for the 8th than for the 9th vowel. With so little accuracy have sounds been observed, and their formations studied, that many of our orthoepists—Mr. Walker, for instance—consider this vowel the same as *our* 4th, and mark the *er* in *ermine*, *perfect*, etc., to be sounded with the same vowel as in *ell*. Other authors,—as, for instance, those of the “ phonotypic ” scheme,—consider this sound identical with *our* 9th, and write the same vowel in *sir* and *surly*, *myrrh* and *murder*, etc.

Vowel 8 is inseparably connected with the letter R in English. That letter alone, after a long vowel, has invariably the sound of *er* (8), as in *fai-r*, *nea-r*, *poo-r*, *ca-re*, *co-re*, *lu-re*, *ac-re*, *luc-re*, *wond-er*, *broth-er*, etc. The R in the equivalent terminations *r*, *re*, and *er*, has little or no *articulative* effect, but in such words as *fairy*, *cheering*,

moorish, *fury*, etc., where a vowel follows the R, that letter has both its vowel and articulative effect.

Er in all unaccented syllables, even when followed by a vowel, has the sound of 8, as in *funeral*, *general*, *liberal*, etc.

In such words as *far* (7.8), *fur* (9.8), etc., the separate vowel quality of R is not so perceptible as when a closer vowel precedes the *r*; but sufficiently nice observation will detect the same final element in these words, and the really diphthongal nature of the combinations.

There is a tendency among some speakers to retain the radical vowel-sound of *err*, *prefer*, *infer*, etc. (8), in the derivatives *erring*, *preferring*, *inferring*, etc., but *e* and *i* before *R* followed by a vowel, have otherwise the same sounds as before other articulations in the same predicament, as in *mirror* (i=2), *herring* (e=4), etc.

Welsh and Irish speakers use the 9th instead of the 8th vowel. In Scotland, though the 8th vowel is not heard, the 9th is not its substitute. The letters *e* and *i* before *r* have the same sound as before other articulations;—*fill* and *firm*, *still* and *stir*, etc. (No. 4 Lingual, General Vowel Scheme, p. 26); *send* and *serve*, *pension* and *person*, etc. (No. 4 English), having respectively the same vowel sounds. The reason of this is, that R, in Scotland, has always an *articulative effect*; it is *trilled* in all situations; it has no *vowel effect* even when final. The terminations *er* and *re* have the peculiar *Scotch* vowel-sound (as in *firm*, etc.), followed by the trilled R.

The 8th vowel and its associate softening of the letter R, are so peculiarly English, that they constitute a *shibboleth* to Scotchmen over the Border. In practising to acquire this English sound, the Northern student may at

first pronounce the syllables *ir*, *er*, *re*, etc., simply as *ah*,—and without any R. By a little practice he will thus check the tendency to raise the tongue to the palate, and be enabled to produce the true sound with precision. Frequently the mere effort to open the vowel to *ah*, and omit the R, falls short of that point, and produces at once the precise English element.

The article *the* is often pronounced 8, when the next word does not begin with a vowel.

A peculiar pronunciation of the vowel sound of R is one of the most striking characteristics of American speech. The trill of the articulate R is wanting, as in England; but the vowel effect is much closer and more labial than the English 8. It is the No. 4 Labio-lingual, of the General Vowel Scheme, (p. 26), a sound between the French *u* and the German *ö*.

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

anker	concert	literal	pertinace
anchor	consort	littoral	putenance
asperate	earn	manner	pervade
aspirate	urn	manor	purveyed
asperation	fir	miner	raiser
aspiration	fur	minor	razor
auger	firs	myrrhine	sailer
augur	furze	murrain	sailor
circle	kerb	onerary	ternary
surcle	curb	honorary	turnery
circulate	kernel	pearl	wert
surculate	colonel	peril	wort

WORDS OF THE SAME PRONUNCIATION BUT DIFFERENT ORTHOGRAPHY.

berth	earnest	herd	verge
birth	Ernest	heard	virge

NINTH VOWEL—as in *up*, *urn*.

In forming this vowel, the tongue is drawn back a degree farther than for the preceding element, but hardly midway to its position for *aw*. The sound is always short in English, except when it occurs before R, final or followed by an articulation. When vowel 9 has to be prolonged, in singing, it is very liable to be changed to the more familiar long sounds *ah* or *aw*. This arises, not from any difficulty in maintaining the 9th position, but merely from the English organs being unaccustomed to maintain it. A Welshman would have no trouble in prolonging the vowel to any extent, because he is accustomed to pronounce it as long as our *ah* or *aw*.

Among English speakers, there is too little precision in this sound. All the open vowels are liable to considerable variation among individual speakers; but the 9th vowel is perhaps one of the most indefinite and variable of any. It would be well if at least a clear distinction were preserved between it and the preceding vowel (8), in such words as *urn* and *earn*, *fur* and *fir*, *purl* and *pearl*, etc., but the erratic habits of both these vowels render it the more difficult to confine them to a settled location in the mouth. When the *Art* of speech shall be more generally studied, such confusions and diversities will be condemned as unworthy of an educated speaker. The perfect distinction of minutely differing vowels is no less a test of polished and elegant speech than is the clear enunciation of unaccented syllables the test of a good pronunciation. The power of marking these vocal and articulate niceties with clearness, evidences a degree of command over the vocal organs which is rarely obtained without considerable

application. It gives, besides, a refinement and graceful variety to utterance, which should, of themselves, sufficiently recommend its cultivation to the tasteful student.

In some English dialects, we hear, instead of 9, a sound approaching to *oo* (13).—ranging in some cases between *oo* and *o* (re), (11), and in others between *oo* and the French vowel *u* or *eu*. It was probably a dialectic habit like this of sounding *o* (11 or 12) for the 9th vowel, which seduced a recent writer on English sounds into the assertion, that the vowels in *cup* and *cope* are identical in quality, and differ only in quantity.* All these peculiarities arise generally from a habitual contraction of the labial aperture, and a too close position of the teeth. Let the defective vowel be practised with a very open formation—even though, at first, the sound be as open as *ah*, and the ear and organs will soon be able to distinguish and form the 9th vowel with precision.

In Scotland, this element is slightly less open, and of a deeper formation than in England,—the tongue being farther retracted towards its position for *aw*. This Scotch sound will be found separately noted in our General Vowel Scheme, (page 26). The open character of the English *u* (9) will be readily acquired, by simply opening the mouth well, and retracting the lips so as to uncover the edges of the teeth; and, when the vowel is followed by *R*, final or before another articulation, by guarding against any lingual vibration for the *R*.

The Irish pronunciation of this element has, like the Scotch, a deeper formation than the English,—partaking more of the quality of *aw*; it will be Anglicised by the same means.

* See early editions of Pitman's Phonography.

[We take occasion here to notice the peculiar French sound *eu*, which, in ignorance of its mechanism, is often so difficult to the English mouth; and to bring it in contrast with the English *u* (9)—the formation of which is equally difficult to French organs. The 9th vowel is not heard in French: the nearest approach to it is the vowel *eu*, as in *jeune*, *peur*, etc. Frenchmen do not, however, pronounce *eu* instead of *u* (9), but generally *aw* or *o* (10 or 11). They may with little difficulty acquire the true sound of No. 9, when they compare its formation with that of their *eu*. The French *eu* is formed with the organs internally arranged as for the French *ê* or the English No. 4, and externally as for *aw* (10); it is the compound, or *Labio-lingual vowel* corresponding to these *simple* Labial and Lingual Formations. (Let the English student of French apply this theory, and he will at once produce the perfect French *eu*. The simplest way to practise is to dwell on the sound of *eh* (4), and, while doing so, to contract the labial aperture to its ordinary shape for the sound *aw*.) The English *u* (9) is intermediate in formation to *aw* and *ah*. The French student of English cannot fail to produce it by sounding the vowel *ah*, and, while doing so, allowing the tongue slowly to adjust itself upon the sound, as if to modify it into *aw* without contracting the lips. The sound is then to be pronounced as abruptly as the vowel in *que*, *de*, etc., and it will be perfect.]

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

carious	serious
caries	series

TENTH VOWEL—as in *on*, *all*.

The 10th vowel is formed by an increased retraction and abasement of the root of the tongue from its position

for the last element, coupled with a slight contraction of the labial aperture. It is perhaps the richest and most mellow-toned of all the vowel-sounds.

Mr. Knowles considers this the *most open* vowel-formation, but our experiments (see page 19), prove that the oral aperture is considerably smaller for this than for the 7th vowel; and the latter may be proved, by a simple and conclusive experiment, to be the most open possible vowel-formation. Thus, let the mouth be opened *to the uttermost*,—by widely separating the teeth,—flattening the tongue, and drawing back the lips; and if a vocal effort be made, *ah* will result. Endeavor to sound *aw*, and it will be found impossible to do so without relaxing the lips or approximating the teeth, and manifestly reducing the oral aperture. In the light of experiment, there can be no question as to the relative openness of these vowels.

The sound of the 10th vowel is often too much modified by *the lips*; their projection and corrugation—faults very common—are injurious alike to grace and distinctness of articulation. It may be stated to be one of the characteristics of a good and practiced speaker, that he forms his vowels as much *within the mouth* as possible. The beautiful *Oratorical Voice*—the Orotund—which many speakers acquire from long practice, but which may also be attained by cultivation, tends very greatly to subdue the action of the lips in speech; and this is attended with another advantage, that it leaves the lips free for their higher offices of emotional expression.

The habit of contracting the lips for this vowel is apt to modify it into the next, viz. 11, or even into 12, to the confusion of such words as *war* and *wore*; *scald* and *scold*, etc.

In practising the 10th vowel for the reduction of labial action, the *tongue* should be *drawn back* as far as possible, while *the lips*—merely covering the teeth a little—remain retracted as for *ah*. With the finger placed under the chin, close to the neck, the downward pressure of the root of the tongue should be distinctly felt.

This vowel and the 7th are most irregularly used in Scotland:—words pronounced with the 7th in England having the 10th in Scotland, and others having the 10th in England being pronounced with the 7th in Scotland. Thus *what* and *walk* (10) are *whăt* and *wălk* (7) in Scotland, while *star* and *calm* (7) are *staur* and *caulm* (10). This exchange does not take place in words in which the 10th vowel is represented by *o* or *ou*. In these cases, the vowel is closed into 12 in Scotland; as in *morn*, *bought*, *cost*, etc. (10), pronounced *mourn*, *boat*, *coast* (12), etc. To correct these irregularities, let words containing the 7th, 10th, and 12th vowels be frequently and carefully read. The English pronunciation will soon become habitual; for the *formation* of the vowels can present no difficulty.

A peculiarity similar to the above is characteristic of the Irish dialect; for while in the diphthongs 7 1 and 7-13 the first element is changed into 10, we hear the 10th vowel (short) changed into, or almost into, the 7th, in the great majority of words in which it occurs; as *not*, *off*, *on*, etc.

The letter *a* after the labial articulation *w* (or *wh*) is in a large proportion of words pronounced 10, instead of 5 or 7; as in *wadding*, *want*, *wander*, *war*, *was*, *wasp*, *wharf*, *what*, etc. This arises, no doubt, from the same principle of assimilation which changes *con* into *com* before a labial formation, and which alters the sound of *n* in *Banff* to that of *m*, and the sound of *m* in *accompt* to

that of *n*. In *wax*, *wag*, *whack*, etc., where a guttural formation follows the *a*, this tendency is resisted, and the vowel, pronounced 5, is assimilated to the *k* or *g* rather than the *w*.

The 10th vowel combines with the 1st to form a common English diphthong—heard in such words as *joint*, *joy*, etc.

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

aucupation	fawned	lorn	pawned
occupation	fond	lawn	pond
auricle	gaud	obduction	sawed
oracle	God	abduction	sod
awed	gnawed	occidental	shorl
odd	nod	accidental	shawl
awn	lord	pawed	stalk
on	laud	pod	stock
	stork	yawn	
	stalk	yon	

WORDS OF THE SAME PRONUNCIATION BUT DIFFERENT ORTHOGRAPHY.

all	ball	call
awl	bawl	caul

DIPHTHONG 10-1—as in *oil*.

This is a beautiful diphthong, compounded of *aw* and *ee*. It is generally somewhat *longer* than the diphthong 7-1, because of the less easy fluency of its elements. To modify the voice from *ah* to *ee* the *tongue* has *only to ascend*, while to modify the sound from *aw* to *ee*, the whole attitude of the tongue has to be reversed: the root is depressed and its surface concave for *aw*, and it is elevated and convex for *ee*, while the lips also take part in the action—and slightly contract the labial aperture while the tongue rises.

The *first* part of the diphthong is very uniform among English speakers: the *second* is less so, being very often stopped at *i* (2), and sometimes even at a more open position. The Irish pronounce almost 7-1, for this diphthong, but with the 7 longer than in the English utterance of that combination. In Scotland the first part of the diphthong is closed into 11 or 12 (monophthong) which is usually united with the 2d Vowel for the second part, forming the diphthong 11-2 or 12-2.

R never occurs after 10-1 in the same syllable in English: the word *choir* is pronounced *quire* as a monosyllabic contraction. In such words as *coyer*, *destroyer*, etc., the full dissyllabic combination 10-1-8 is clearly preserved.

ELEVENTH VOWEL—as in *ore*.

This formation, intermediate to *a*(ll) and *o*(ld), (and identical with the sound of *au* or *eau* in French) is used in English instead of the alphabetic O, when before R in the same syllable. The latter vowel is a closing *diphthong*, and the open element 8(R) could not be pronounced after it without forming a new syllable. This has led to the omission of the second, and the opening of the first, constituent of the diphthong before R, to render the combination smoothly monosyllabic.

The open vowel quality of the English R draws all preceding closer vowels to a greater degree of openness than they have before articulations. This is particularly noticeable in the 3rd and 12th vowels, which are regularly changed into the 4th and 11th before *r* (8); but the 1st and 13th—the closest vowels—equally illustrate the tendency. Very few English speakers pronounce *ee* (1) and *oo* (13) distinctly before R,—at least in conversational

utterance. Such words as *beard, hereafter, earwig, merely*, etc.; *cure, your, poor*, etc., are flippantly pronounced 2-8 and 11-8, instead of 1-8 and 13-8. However this may be passable in ordinary conversation, it must be reckoned objectionable in more deliberate speaking, or in reading. In some cases, the close element, instead of being opened, is altogether omitted before *r* (8), as in *cheerful, future*, etc., pronounced by many speakers, *cherful, futyur*, etc., but the full pronunciation of these words *che-er-ful, fute-yure*, etc., is more elegant, and always given by those who "speak by the card."

There is a delicacy in the softly blending English combination 11-8 (*o-re*), which is worthy of attention from provincial speakers—especially in Scotland where the pronunciation of these letters is peculiarly harsh. In this lies one of those little points which are, perhaps, the most difficult to be separately appreciated, yet which give to dialects their most prominent features.

That the English 11 (*o-re*) is not the same as the radical part of the 12th vowel (*O-oo*), but a more open formation, will be evident on comparing the Scotch and English pronunciations of such words as *ore, shore, chorus, porous*, etc. The Scotch *o* is the simple radical part of the English *O-oo* (12); but it is distinctly different from the *o* (11) before *R* in English. The rapid alternation of the proximate formations *aw—oh*, or *oh—aw*, repeatedly uttered, will lead the ear to recognize the medial sound. The *R*, when final or before an articulation, must not be *trilled*: but when a vowel-sound follows the *R*, as in *glory, story, victorious*, etc., the *R* receives both its vowel and articulate effect. In such words, therefore, there is a double difference between Scotch and English pronunciations.

The monosyllabic combination 11-8 does not invariably supersede the dissyllabic form 12-8: in nouns formed by the addition of the personal termination *er* to a verb, as *rower*, *sower*, *mower*, etc., the *o* retains its diphthongal quality, and these words are thus distinguished from such as *roar*, *soar*, *more*, etc.

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

blore	hoarse	roar	tore
blow-er	horse	row-er	tow-er
borne	lore	shore	torus
born	low-er	show-er	taurus
form (a seat)	more	sore	wore
form (figure)	mow-er	sow-er	war
gore	mourn	store	import (11)
go-er	morn	stow-er	import (10) [to signify]
hoar	ore		
ho-er	ow-er		

WORDS OF THE SAME PRONUNCIATION BUT DIFFERENT ORTHOGRAPHY.

board	borne	gored	oar
bored	bourne	gourd	ore
soared	four	p ^o ur	core
sword	fore	pore	corps

TWELFTH VOWEL—as in *old*.

The alphabetic or name-sound of the letter O is, in English, invariably associated with a closing sound of *oo*, forming a labial diphthong, 12-13, corresponding to the diphthongal name-sound of A (3-1).

The radical part of the sound of O is somewhat closer than the preceding element 11 (*ore*), but it is hardly, perhaps, so much as half-way between it and 13 (*ooze*). The diphthongal habit tends to make the initial element of No. 12 too open in common pronunciation, so that the

combination is sometimes even in danger of being confounded with 7-13, as in the Cockney pronunciation of *no*, almost the same as *now*; but this is an extreme: less degrees of openness, however, particularly to *o* (11), are very common. In this respect, as well as in several other points already noticed, there is a striking analogy between vowels 3 and 12.

A very common fault in the mechanism of this sound consists in a pursed projection of the lips to "something like the *shape* of the *letter* *o*," (as the student is actually directed in many of our Elocution books;) but the roundness of the mouth must be *internal*, not external. The lips, for expression's sake, should be used as little as possible in speech. To form this vowel the tongue should be well depressed backwards, while the lips simply approximate a little. This *inward formation* of *O* is, besides, productive of a mellowness of tone which is particularly agreeable, especially in public speaking.

The tendency of diphthongs to slide colloquially into a sound intermediate to their component elements, is illustrated in a common provincial English utterance of this vowel—noted in the General Vowel Scheme, (page 26) as the 2nd Labial Formation.

In Scotland, the long *o* is pronounced monophthongally. The vowel may be perfectly Anglicised, by simply allowing the sound to taper into *oo* before closing.

Thus, *foe* (=fo-oo), *home* (=ho-oom), *note* (=no-oot).

The Northern student will at first be apt to overdo this *in quantity*, but practice will enable him to give the requisite abruptness to the combination. In the shortest utterance of the English vowel, *the diphthongal quality is really heard*. By comparing the English and Scotch pro-

nunciations of such words as *hope*, *moat*, *yoke*, etc., this fact may be made obvious to any ear.

In Scotland the sound of *a* (3 monophthong) is common instead of *o* (12), as in *hame* for *home*, *stane* for *stone*, *alane* for *alone*, etc. In some districts a closer lingual sound is used in such cases, and we hear *steen* for *stone*, *been* for *bone*, etc.

The 12th vowel is comparatively seldom heard in Scotland: its most usual substitute, however, is the 10th. Words in which the 12th vowel is represented by *ou* or *o* before *l*, as *soul*, *mould*, *folk*, *bolster*, etc., are pronounced with the diphthong 9-13 in Scotland. In Ireland a similar pronunciation occurs, but not to the same extent. The 12th formation (but monophthongal) is usually sounded in Ireland in words pronounced with that vowel in English.

Many words containing the letter *o* before *ll*, *lt*, *ld*, *ss*, *st*, are anomalously pronounced with No. 12 instead of No. 10; as *roll*, *toll*, *poll* (head), *bolt*, *old*, *gross*, *engross*, *most*, *post*, etc. Vowels before elisions, or before silent letters, generally have long sounds: thus, *don't*, *won't*, *folk*, *yolk*, etc., are pronounced No. 12 instead of 10.

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

bow (for shooting)	row (a range)
bow (salute)	row (disturbance)
diocese	proceed
diesis	precede

WORDS OF THE SAME PRONUNCIATION BUT DIFFERENT ORTHOGRAPHY.

no	toe	beau	doe	lo	roe
know	tow	bow (knot)	dough	low	row (v.)

THIRTEENTH VOWEL—as in *pull*, *pool*.

This is the closest of the Labial class of Vowels. In its correct formation, the base of the tongue is depressed, and the lips are evenly approximated. The mechanism of No. 13 is very often rendered deforming to the mouth, by the lips being “thrust out like a funnel.” Indeed this is the mode of formation described in many books which profess to give directions on the subject ; but it is faulty in many ways, both to the eye and the ear. It muffles the voice ; it is a hindrance to expressive utterance ; and it impedes articulation, greatly aggravating difficulty in cases of stammering. The corners of the lips should meet, and their central edges approximate, *without projection*, and the depression of the root of the tongue should be so firm as to round off the angle of the neck and chin. The close position of the lips is merely required to lessen the external aperture of the mouth, and, in whatever way this may be effected, the sound will be modified into *oo* (13). The projection of the lips is therefore as unnecessary as it is unquestionably graceless.

This element, like the 1st, has an Articulative effect, when the modifying organs are further approximated during the continuance of the sound. By a slight appulse of the lips, the vowel *oo* becomes the articulation *W*. Thus, if the lips be momentarily *compressed between the finger and thumb* while sounding *oo*, the voice will be modified into *woo*, *woo*, *woo*, etc.

Words ending with *oo* are liable to the fault noticed with respect to *E*, (page 119) ; the sound dies away in breath as the organs assume their close position. This habit will be easily corrected by prolonging the sound, and sharply finishing it in the glottis, without waste of breath.

The thirteenth vowel is so associated with the sound of the articulation Y in English, from the alphabetic monograph U bearing the compound name Yoo, that the English student has often some difficulty in believing that *u=yoo*, is more than a simple vowel; but he must lose sight of *letters* in his study of *sounds*, and then he will be able to analyze this seemingly simple element, and detect in it an articulative action, as well as a vowel sound.

In Scotland we commonly hear the 3rd *Labio-Lingual* formation û (*French*) instead of oo (13). This is the *general* Scotch pronunciation of words containing No. 13, represented by *o* or *oo*, as in *do*, *too*, etc. In some districts the *Lingual* sound *i* (2) or *ee* (1) is used,—as in *dee* for *do*, *seen* for *soon*, *skill* for *school*, *fill* for *fool*, etc.; and in long syllables,—as when the vowel is final,—the *Third* vowel (monophthongal) is not uncommon; as *tæ* for *too*, *day* for *do*, etc. Thus the sentence,

³ “*Poor John’s* ¹² *so* ³ *heated* ³ *that* ^û *he’s* ³ *just* ¹³ *gone* ² *out* *to* *cool* *himself*,”
conveys to an English ear the rather startling assertion, that “John is so *hated* that he has just gone out to *kill* himself.”

Element thirteen is the common Scotch sound of the English diphthong 7-13, as in *house*, *plough*, *now*, *cow*, etc., pronounced *hoose*, *ploo*, *noo*, *coo*, etc.

In Ireland this vowel is seldom heard exactly as in England; the sound used instead of *oo* is the *Labio-lingual* formation produced by the union of the positions { ^{ee} _{oo}. This gives a very peculiar sound, which an English mouth will have some trouble to mould. The Irish vowel will be Anglicised by simply holding the tongue well back; the labial position being the same as for *oo*.

The sound of the alphabetic U (=y-13) is one of the

shibboleths of American pronunciation. Instead of the articulate Y, the vowel *ee* (1) is heard with a distinctly syllabic effect, as in *tune*, pronounced *tee-oon*; or the formative positions of *ee* and *oo* are combined, as in the Irish sound above noticed.

Vowel thirteen is always long in the combination y-13 ($\bar{u}=$). The following are the principal words in which No. 13 is short: book, bosom, brook, bull, bullet, bulletin, bullion, bullock, bully, bulwark, bush, butcher, cook, courier, crook, cuckoo, cushion, foot, full, fuller, fully, good, goody, hood, hook, look, pull, pullet, pulley, pulpit, push, puss, put, rook, stood, sugar, to, took, woman, wood, wool, would.

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

could (✓)	look (✓)	wood (✓)	sue
cooed (—)	Luke (—)	wooded (—)	shoe
full (✓)	should (✓)	Jew	
fool (—)	shoed (—)	dew	suit
pull (✓)	to (✓)	jewel	shoot
pool (—)	two (—)	duel	soot

WORDS OF THE SAME PRONUNCIATION BUT DIFFERENT ORTHOGRAPHY.

due	room	few	too	wood	rude	choose
dew	rheum	feu	two	would	rood	chews

THE ASPIRATE, H.

We have shown, at page 32, that the letter H does not represent any fixed formation, but simply an *aspiration of the succeeding element*. Thus, H before *e* is a *whispered e*, before *a* a *whispered a*, etc.—differing, however, from the simple whispered vowel by the expulsiveness of the aspiration, as before explained;—and H before *alphabetic u*—which, it will be remembered, represents the combination

y-oo—denotes a whispered Y, as in *hue*, *human*, etc., pronounced *Yhue*=*Yhyoo*, *Yhuman*. etc.

Some writers analyze the sound *Wh* into *Whw*, correspondently to *Yhy*; and it must be acknowledged that many persons do pronounce such words as *what*, *which*, *when*, etc., with a *Vocal* as well as a *Breath W*,—*Whwat*, *Whwen*, etc.—but this is by no means the general mode. *Wh*—the *Breath W*—should be in such words used independently; although its lingual correspondent, the *Breath Y*, is not so employed in English. The latter is always associated with the sound of Y; and it occurs only before the alphabetic sound of U.

English speakers too commonly omit the aspirate of Y and W, and so confound in their pronunciation such words as *hue* and *you*, *which* and *witch*, *whale* and *wail*, *whither* and *wither*, *whig* and *wig*. These aspirations are very unwelcome to the English mouth, but they can only be omitted at the expense of ambiguity. How very awkward to have a brother named Hugh: “I assure you I gave the book to ‘Ugh.” “I beg your pardon—that you certainly never did.” “Upon my honour!—‘Ugh cannot have forgotten it.” “I!—come, come?” “*You!* no, no, I did not mean *you*, but ‘*Ugh*, your *brother* ‘Ugh!”

The Vowel aspirate is very irregularly used in many parts of England; it is heard when it should be silent, and silent when it should be sounded; and that with such perversity that pure initial vowels are almost unheard, except in cases where they ought to be aspirated. A gentleman dining on cold hare, astonished his entertainer by exclaiming, “The hair is very ‘ot.” Explaining himself, when he observed the misapprehension, he said, “I mean the *hair we breathe*, and not the ‘*are we’re heating*.”

This remarkable perversity of custom has been amus-

ingly made the subject of a petition in verse from the letter H to the inhabitants of Shrewsbury, who are notorious for their *haddiction* to this *abit*.

Whereas by you I have been driven
From *House*, from *Home*, from *Hope*, from *Heaven* ;
And placed by your most learn'd society
In *Ills*, and *Anguish*, and *Anxiety* :
Charged, too, without one just pretence,
With *Atheism* and *Impudence*,—
I now demand full restitution,
And beg you'll mend your Elocution !

To this petition by the Rev. R. W. Evans, an *aspiring* Shrewsbury poetess aptly rejoined :

Whereas we rescnded you, ingrate,
From *Horror*, *Havoc*, and from *Hate*,
From *Horse-pond*, *Hungering*, and from *Halter*,
And consecrated you on *Altar*,
And placed you, where you'd never be,
In *Honour*, and in *Honesty* ;
We think your talking an intrusion,
And shall not change our Elocution.

Many public speakers contract a very disagreeable habit of giving a *vocal* commencement to H,—*ũhold*, *ũhundred*, etc.—as if fearful that otherwise the letter would not reach the ears of their auditors. But if it be legitimately aspirated, and no more, it will not fail of audibility: the *succeeding vowel* makes it heard far better than can the tasteless expedient of putting a vowel sound before it.

A Northern habit of forming, or rather *deforming* the H, consists in giving a degree of guttural compression to the breath, by approximating the base of the tongue and the soft palate, producing the effect of the Scotch *ch*, which otherwise is not used as an initial sound in Scotland. There is something in this peculiarity extremely harsh and grating to English ears. It should be studiously avoided,

and easily may be,—by all who aim at propriety in speaking English.

Let the Stammerer study attentively the characteristics of the letter H. It is invariably a severe stumbling-block. He will find that, in his fruitless efforts to pronounce it, or rather to pronounce the vowel after it, his chest is bearing down with collapsing force, and the breath welling out in heavy spouts from his convulsed glottis. A useful exercise to check this, consists in *prolonging an expiration* as much as possible. Let the lungs be fully inflated, by expanding the chest to its utmost breadth, and then let the breath be emitted slowly, softly, and equably in one unbroken stream. After a little practice, the *whispered expiration* will be continuable almost as long as a *vocal one*—a vowel. The junction of this breathing with the vowels must next be aimed at. Thus:—alternate, in the prolonged expiration, the voice and the whisper of the same formation, *h-e-h-e-h-e*, etc., *h-o-h-o-h-o*, etc. If the difficulties with initial vowels have been first removed, the stammerer will not be long in subduing this—perhaps the most troublesome feature in his impediment. Habit will, for a time, baffle his skill, or try it sorely; but steady perseverance will overcome even the tyranny of habit.

In the following words, though *H* is written, the vowels are not aspirated: heir, heirship, heirloom, etc.; honest, honesty, etc.; honour, honourable, etc.; hostler; hour, hourglass, etc.; humble, humbly, etc.; humour, humorous, etc.

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

had	heat	hoe
add	eat	owe, oh
hair, hare	heel	hive
air, ere, e'er, Ayr, heir, Eyre	eel	I've

hall	hell	hold
all	ell	old
hand	her	hone
and	err	own
hasp	hide	howl
asp	eyed	owl
hat	high	Hoyle
at	eye, I	oil
hate	hill	Hugh, hue, hew
eight	ill	you, yew
hear	his	
ear	is	

WORDS OF THE SAME PRONUNCIATION BUT DIFFERENT
ORTHOGRAPHY.

whole
hole

SECTION SECOND—ARTICULATIONS.

IN the first part of this work the leading principles of articulation have been explained, and a complete scheme given of the Articulate Elements of Language. We shall now proceed to offer some *practical observations* on each of these elements, with reference to their *formations*, *defects*, *combinations*, etc.

This department of our work will be of especial service to teachers, parents, and others who have the management of children, in enabling them to *prevent*, or *check* the formation of defective or uncouth habits of articulation; and to *direct* the vocal efforts of children in such a way as to insure fluency, grace, and distinctness of speech.

To the lisping, burring, mumbling, and mouthing "children of a riper growth," who are conscious of their cacophonies, and desirous to correct them, these obser-

ventions and exercises furnish the means of removing such articulative blemishes. To the public speaker they offer principles and praxes such as, in application, cannot fail to give articulation its highest effectiveness.

The *stammerer* will find many remarks under the different elements, which will be of much service to him, both as directory and cautionary assistances. An intelligent practical acquaintance with the mechanical principles of speech is the only rational foundation for a system of cure. We cannot better advise the stammerer than bid him study well the natural principles of speech. Knowing them familiarly, he must be dull indeed if he does not work out a large measure of improvement from them. For perfect freedom from impediment, however, oral instruction, and the vigilant eye and ear of a master may be, in almost all cases, necessary; for stammering is generally accompanied by a great want of perception of the causes of error as well as by a nervous agitation, which unfits the stammerer for self-observation and correction.

The following table exhibits the articulations in the order in which they are treated of in the succeeding dictionary of sounds:

I.	P,	<i>as in</i>	pay	XII.	R,	<i>as in</i>	rare
II.	B,	"	bay	XIII.	L,	"	lie
III.	M,	"	may	XIV.	T,	"	tie
IV.	Wh,	"	whay	XV.	D,	"	die
V.	W,	"	way	XVI.	N,	"	nigh
VI.	F,	"	feel	XVII.	Sh,	"	shy
VII.	V,	"	veal	XVIII.	Zh,	"	giraffe
VIII.	Th,	"	thin	XIX.	Yh,	"	hue
IX.	Th,	"	then	XX.	Y,	"	you
X.	S,	"	seal	XXI.	K,	"	come
XI.	Z,	"	zeal	XXII.	G,	"	gum
				XXIII.	ng,	"	sing

P.

The formation of P consists, 1st, in a steady equal contact of both lips, so as to retain the breath perfectly behind them; and, 2nd, in an equal and rapid disjunction of the lips, to allow the breath to escape. If the contact of the lips be not sufficiently firm to stop the breath, the letter will strike the ear like *F*; and if their action be heavy, the *p* will be inaudible when final, and very ungraceful in other situations.

While the lips are in contact, there should be no pouting, or motion of any kind; and their separation should be by one light and uniform action, so that the whole edges may be simultaneously disengaged; for if they are projected and *pushed* asunder—as they not unfrequently are—the features are deformed, and many faults, both of articulation and expression, are created. *P* before *F* or *V*, is in this way rendered an impossible combination, or at least an excessively ugly one, in the attempt; and many of the *vowel* sounds also suffer in quality from the contracted and rounded aperture of the mouth. The *corners* of the lips must be brought apart in finishing P, or all the vowels from *ee* to *ah* will be more or less injuriously affected. Besides, the habit of forming the labial-articulations in a loose and wriggling way interferes much with the expressive power of the lips in the manifestation of feeling. The mouth is the most expressive index of emotion, and that whose signs are least capable of suppression. The eyes have been called the “windows from which the soul peeps forth;”—we should call the mouth the *door* by which she actually comes forth. But if, by ungainly habits of speech, the delicately-varying expressiveness of the mouth may be defeated, how impor-

tant—to the orator and physiognomist at least—must be the power of regulating the articulative motions of the lips.

Where there exists any fault in the formation of this letter, the following exercise will be found highly improving. Practise words containing the letter *P*, and keep the lips in firm contact *for some seconds* at each *P*—observing that while the pressure of the breath is continued, there is no *motion* of any kind in the lips. Observe, also, that there is no escape of breath by the nostrils.

This exercise will subdue and, with a little care, soon remove the tendency to mal-articulation of *P*. It will be found very useful to *stammerers* also in giving power over the facial muscles. The lips, in many cases of stammering, are so tremulous and feeble in their motions, that they cannot retain the breath under the slightest pressure, but start off again the instant they meet, causing repetitions of the labial syllable—*pa-pa-pa-paper*. Sometimes in the effort to separate the lips, the *upper lip* descends with the lower lip, dragging down the nostrils, and deforming the whole countenance. The *upper lip* should have as little motion as possible, and it should never be depressed below the edges of the upper teeth.

The letter *P* presents another difficulty to stammerers, from an *upward pressure of the lower jaw* locking the under teeth within the upper range, while the lips are in contact. This renders a downward motion of the jaw, as well as of the lip, indispensable to finish the letter; and the teeth are forcibly jerked down, again to be jammed upwards in fruitless repetitions; often, instead of disengaging the jaws by the descent of the lower teeth, the stammerer puts the effort of separation into *the head*, and tosses it backwards, or draws it from side to side. *P* is a formidable difficulty under such circumstances; but a careful

study and practice of the correct formation of the letter will soon remove this source of impediment and correct any fault that may interfere with grace or distinctness. Exercise *before a mirror* greatly facilitates the correction of any fault of oral action. To *see* the error is half-way to its cure.

P is an obstruction of *breath* only; there is no effort of *voice* in its formation; it has no sound but the slight *explosiveness* of breath which finishes it. A fault is often created by the conjunction of the lips while the breath is being drawn in, so that a degree of audibility is given *to their meeting*. This, in an aggravated degree, accompanied by deficient glottal power, produces stammering of a very heavy and convulsive kind. The lips, and the organs of articulation generally, should assume the positions required for the different elements, gently and after the act of inspiration is finished—retain them firmly while the breath is compressed behind or between the articulating organs, and by a light disjunction, give off the final effect of the articulation with rapidity. The letter *P*, having no other element of audibility than that which accompanies the organic separation, can never be deprived of this without indistinctness or impediment.

We may express in a sentence the great leading characteristics of good and bad articulation. The energy of vocal action is *disjunctive* in good speaking, and *conjunctive* in heavy or impeded utterance; that is to say, the contact or approximation of the organs is light in the one case, and heavy in the other;—the general direction of the actions is *downwards* from articulations to vowels in good speech; and in indistinct or stammering speech, the force of the actions is upwards from vowels to articulations. In order to be clearly understood, then, with

reference to the letter *P*, we observe, that it is not made by the conjunction of the lips, but by their *separation*; and this of course implies previous contact. If the Stammerer, and the Mumbler, and all classes of bad speakers, could comprehend and apply this principle, they would soon rejoice in distinctness and fluency.

We must farther observe, that in separating the lips there should be no jerking of the jaw. If a vowel follow the *P* in the same syllable, the teeth should descend freely for the vowel, but the *P* itself must have no motion of the teeth, either upwards when the lips meet, or downwards when they separate. The teeth should remain apart even when the lips are in contact.

There is some little art required to make *P* audible when it occurs in connexion with any of the other *obstructive articulations*, as in *nap-kin*, *step-quickly*, *slep-t*, *cheap-tea*, *scape-goat*, etc. To master this difficulty, lightness and precision of action are the essential requisites.

EXERCISE.

ape tay
ap tap

ape kay
ap cap

ape day
ap dap

ape gay
ap gap

In finishing *P* and other articulations, it is highly important in every case of difficulty, to notice that the issue of breath be restrained immediately on the organic separation. If the breath pour out continuously, and the chest fall, the lungs will soon be exhausted. It is the want of this power to retain the breath after articulations which causes the great difficulty which Stammerers experience in joining articulations to succeeding vowels. They will often get smoothly over the consonants, and stumble at the vowel, utterly unable to connect the two. They must bear in mind that the breath in articulation is

exploded *from the mouth*, and not from the chest. The space within which the air is compressed is *above* the glottis, and the effect of the compression must not be communicated below the glottis.

When a word contains the combination *pp*, the effect of only one *p* is heard; as in *apprise*, *upper*, *supplicate*, etc.; but when one word ends with *P*, and the next commences with the same letter, the final and initial elements should in general be separately articulated. Two *p*'s can only be made by a repetition of the action of one. *B* and *M*, being formed by the same labial action as *P*, will not blend with that letter; but the *P* must be separately finished when it comes before them. Not, however, when it is *in the same word*, as in *upbraid*, *upborne*, *upmost*, *topmast*, etc., where the *P* is a mere stop of the voice and loses its final percussiveness. In *cupboard*, the *b* only is heard, and in *subpæna* the *b* is sunk, and *p* heard.

It was noticed at page 38, that the nasal letters *M*, *N*, *NG*, must have the breath perfectly obstructed by the mouth, in order that the current of sound may pass completely through the nostrils; it follows, therefore, that any of the obstructive letters coming before either of the nasal elements, must be finished independently of the nasal letter, or the explosive effect of the obstructive letter must pass through the nose. This creates a degree of sniffing which is very ungraceful, and which may be easily avoided by a light and rapid articulation of the obstructive element. *P* or *B* before *M*, must, from the hiatus caused by the repetition of the same action, be allowed to nasalize their final breathings when they meet *in one word*, or in common phrases; but there is no excuse for sniffing the terminations of *T*, *D*, *K*, and *G* before *M*, for these linguals and gutturals are produced

by actions which may be rightly performed without at all disturbing fluency of articulation. On the same principle, *T* and *D* before *N* in the same word, must lose their oral explosiveness; but the other obstruatives (*B*, *P*, *K*, *G*) should never be allowed to do so in the same situation. So, too, *T* before *L*, as in *outlaw*, *battle*, etc., is not finished by removing the point of the tongue as in other situations, but by extrusion of the breath over the sides of the tongue, through the apertures of *L*.

P initial combines only with *l*, *r*, and *y* in English, as in *play*, *pray*, *pew*, etc., therefore in all the other combinations which we write, namely, *pn*, as in *pneumatic*; *ps*, in *psalm*; *pt*, in *ptarmigan*, etc., the *p* is silent. *Pw* is a common *French* combination, as in *poids* (pronounced *pwah*).

WORDS CONTAINING ELEMENTS OF DIFFICULTY.

Apt, chapter, cupful, fop, heptarchy, kept, leapt, mapped, napkin, naphtha, pamphlet, papaverous, pauper, pavement, peep, people, peevish, pepper, pebble, pimple, pipkin, pippin, pivot, popped, public, puff, puppet, wrapt, stopped, stopcock, upmost, upward.

B.

This articulation differs from the preceding in no degree, extent, or continuance of labial pressure, (as has been erroneously supposed), but in the employment of an apparatus unused for *P*,—i. e., the vocal organ—in addition to all the action, compression of breath, and explosive force of *P*. The external action of both letters being the very same, our remarks on the formation of *P*, will apply equally to this articulation. If the junction of the lips be too feeble to intercept the breath, the letter will sound like *V*; and if their action be heavy and sluggish, pouting,

or unsteady, the same faults and difficulties will be produced which were noticed under the head of P. While the lips are in contact for P, there is *no sound* produced; the prolongation of the contact only prolongs silence; but in B *there is a sound heard, while the lips are closed*. The glottis is in the vocalizing position, and the breath in passing through it creates sonorous vibration; during the continuance of which, the neck, at its junction with the chin, will be observed to distend. This arises from the swelling out of the *pharynx*, into which the stream of air from the glottis, unable to escape by the mouth or nostrils, forces itself. The muffled vocal sound which is heard during the distension of the pharynx ceases as soon as that compartment is filled, and it can only be renewed after the pharyngeal muscles have been allowed to contract. Many persons, from deficiency of pharyngeal power, are unable to produce the shut voice in these elements; so that B, D, and G are hardly distinguishable from P, T, and K. This *whispering* of the Voice Articulations is a remarkable characteristic of Gaelic, Welsh, and Irish speakers. After a little practice the power of vocalizing the obstructive formations may be perfectly acquired, and the national defect will disappear. Let the student *dwell* on the articulation as long as possible in its various situations; and though, at first, he may be able to produce only a *momentary* stroke of voice, he will soon develop such an elasticity in the pharynx as will enable him to continue the sound for a couple of seconds. It is necessary to guard against the slightest *nasal* sound in this exercise. The nasal tubes open from the pharynx, and if they are not perfectly closed by their natural valve—the soft palate,—the pharynx will not distend; it is then a *leaky bag*, and cannot be inflated.

In forming B, and indeed the Obstructive articulations generally, the compression of breath must not cease until the external contact terminates, or the explosive finish of the elements will be lost. It is a peculiar characteristic of some varieties of Stammering, that the vocal part of B, D, and G, will be heard perfectly, while the letters *will not out*. The Stammerer repeats the articulation again and again with the pharyngeal murmur distinct, yet without the least emission of breath following. He is consequently unable to connect the initial letter with the succeeding vowel. In this case, the muscles which constitute the sides of the pharynx contract too soon; the instant they yield to the pressure of air, they again collapse,—either from a want of power in the muscles themselves, or from the Stammerer's inability to continue the effort until his lips are separated. Expedite the latter action, and the former difficulty will cease. Whatever be the cause of the impediment, energetic and intelligent practice will soon remove it.

B *initial* combines with *l*, *r*, and *y*, as in *blue*, *brew*, *beauty*. Bw—which is a common *French* combination, as in *boire* (pr. bwahr)—is heard in English in *buoy*, *buoyant*, etc.

In the *final* combinations *mb* and *bt*, *b* is *silent*, as in *dumb*, *bomb*, *doubt*, *debt*, etc.

B before M, *in the same word*, as in *cabman*, is not finished by a separation of the lips; but before N this final action of the B should not be wanting.

EXERCISE.

abe tay	abe kay	abe day	abe gay	abe nay
ab tab	ab kab	ab dab	ab gab	ab nab

The combination BB *in the same word*, sounds like single B; but when one word ends with B, and the next

begins with that letter, or with M, both elements should be heard, and—unless the words form an unimportant phrase,—the lips should be separated between the articulations.

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

back	bail	bath	beach	bear	belt
pack	pail	path	peach	pear	pelt
birch	best	bet	bill	bind	blunder
perch	pest	pet	pill	pined	plunder
boor	bore	bother	breach	bull	bunch
poor	pour	pother	preach	pull	punch
		cab	cub	mob	
		cap	cup	mop	

WORDS CONTAINING ELEMENTS OF DIFFICULTY.

Abracadabra, babe, babble, baptism, bauble, beblot, bedaub, beef, bepeppered, beverage, biblical, biped, blubber, brabble, bribe, bobbin, bubble, bump, hubbub, probable.

M.

This letter has the same orally obstructive formation as P and B, but the nasal passages are uncovered, and the air, instead of collecting within the mouth and pharynx, flows continuously through the nostrils. The soft palate is the *valve* which covers or uncovers the *nares*; its action in doing so is extremely limited, as may be *seen* by forming G and *ng* with open mouth before a glass; the sound may be intercepted and nasalized at pleasure, by a very slight *but perceptible* motion of the upper part of the *velum*, while the contact of its edges with the tongue remains undisturbed. This contact is the necessary formation of G, of which *ng* is the *nasal form*. We have said that the stream of breath cannot be directed *entirely* through the

nostrils, unless it be obstructed in the mouth. It is a common mistake, however, to think that the soft palate must, in order to open the nares, lie on the tongue for all nasal sounds. If the breath were thus uniformly intercepted at the *posterior* articulating part of the mouth for all the nasal elements, there could be no difference between M, N, and *ng*. The contact of the anterior organs would not influence the sound, unless the vocal current reached those organs. The formation of the English Nasals requires that the oral aperture be closed, and the breath directed against the obstructing organs; while the withdrawal from the *nares* of that part of the soft palate which lies opposite to them, gives the breath a passage through the nostrils; and the articulation is not finished until the organs which close the oral passage are separated. If the obstructing organs be not disjoined, the element loses its *articulative* quality, and is merely a *nasal vowel*. Great indistinctness arises from the want of this action when *m*, *n*, and *ng* are final. The *French* seldom sound the nasal articulations when final, or when before another articulation; in these cases they give, instead, a nasal quality to the preceding vowel, making the voice issue partly by the mouth and partly by the nose. There are no such sounds in English. (See French Semi-Nasal Vowels, page 38.)

The English nasals are all *purely vocal*. They are often faultily formed in this respect:—sometimes the voice is *breathy* and ill-formed in the glottis; and sometimes its sonorous quality is injured by some contraction of the nostrils. In order to remove these blemishes, let the nasal elements be practised separately with the same prolonged vocality which was recommended for vowel sounds. When the vocalizing of the nasals has been perfected by this exercise, they should be practised with

the requisite articulative actions, and in their various combinations.

The nasal elements, and also the letter L, are often called *Semi-vowels*, because they are perfectly sonorous, and capable of separate and prolonged enunciation, like vowels. These semi-vowels may each separately form a *syllable*; L and N often do so in English, as in *castle*, *fasten*, etc.; and M has a similar syllabic effect in *rhythm*, *chasm*, *prism*, etc. In the pronunciation of such words, care must be taken that no vowel sound is heard between the *m* and the preceding articulation.

The letters of this class are also called *Liquids*, because they flow into other articulations, and seem to be absorbed by them. This peculiar quality might perhaps be better understood, were we to call it *transparency*; they *show through them* the nature of proximate articulations. When the Liquids occur before voiceless articulations, they are so short as scarcely to add any appreciable *quantity* to the syllable; *wilt*, *bent*, *brink*, *lamp*, etc., have thus but very little more duration than *wit*, *bet*, *brick*, *lap*, etc. The liquid or transparent letters in this situation cannot be prolonged without producing *drawling*, and an un-English pronunciation of the words. When these letters, however, come before *Voice Articulations*, they form the longest syllables in the language,—as in *willed*, *bend*, *tongues*, *lambs*, *film*, *helm*, etc., which have as long quantity as any syllables containing the same vowels can have. The liquids have the same quantity as other Voice Articulations *before vowels*. They are, however, longer *when final*; and it is one of the greatest beauties of good speaking, to give them, then, their “fair proportion.” The “liquid” quality should not extend to *proximate words*, but only to letters *in the same word*.

M before *f*, *v*, or *w*, presents a difficult combination that is seldom heard with distinctness from ordinary speakers. M is especially awkward before *f* and *wh*, which, being voiceless, shorten the liquid, and render rapidity of action necessary, as in *comfort*, *amphibious*, *somewhat*, *somewhere*, etc.

EXERCISE.

aim fay
am fam

aim vay
am vam

aim way
am wam

M generally presents a serious difficulty to the Stammerer. Voice feeble and ill-formed,—collapsing chest,—*adhesive* lips,—motion in the nostrils,—descent of the upper lip,—upward pressure of the lower jaw,—ascent of the chin,—twisting and protrusion of the lips;—and the very smoothness of the letter which will not bear such rough antagonistic treatment,—all combine to render M one of the greatest difficulties, and the Liquids generally, the greatest obstacles to fluency that the Stammerer meets with. The *explosive* letters will bear a good deal of harshness, but these delicate articulations are impracticable amid such violence of effort.

Careful and patient practice, with the aid of a glass, and sometimes with the temporary assistance of direct appliances to check convulsive action, will, however, surmount even these apparently impassable barriers to speech.

M initial combines with *y*, as in *muse*, but with no other articulation in English. It is *written*, but silent, before N, as in *mnemonics*. Mw is a common *French* combination, as in *moi*, pronounced *mwaîh*.

WORDS CONTAINING ELEMENTS OF DIFFICULTY.

Amphib, anemone, comfort, emphasis, film, helm, lym-

phatic, mammalian, mammon, map, member, memnonian, memoir, memorable, mime, mimetic, mimic, minimum, mob, mumble, mummary, nymph, rythm, spasm, triumph.

Wh.

This element is the voiceless form of W. In its formation the lips are *closely approximated*, and then rapidly *separated* while the breath is not obstructed. Sometimes a slight degree of *vocality* is added to the action: in consequence of the common but erroneous theory which resolves the sound of *wh* into *hw* or *hoo*. *Wh* should, analogously to P and the other Breath Articulations, be pronounced entirely without voice. If the action be confined to the lips, Wh will be found to be so unexceptionable and delicate in its articulative effect, that even the Cockneys, who, in their inconsistent horror of aspirations, confound it with W, need not reject it as uncouth. In Scotland the action of Wh is often not confined to the lips, but thrown back to the soft palate also, so that the breath is at once modified into the guttural *ch* and the labial *Wh*. The effect of this guttural modification is peculiarly harsh and ungraceful.

Wh is not heard before *o* or *oo*. In these cases, the vowel is simply *aspirated without the articulative action*: this gives *H* instead of *Wh* before these vowels, as in *whole*, *whose*, etc., pronounced *hole*, *hooze*, etc.

Wh and W should be contrasted in practice till the ear and organs recognize and execute the difference satisfactorily.

EXERCISE.

wha wa	wa wha	wha wa wha	wa wha wa
	whim wim	whip wip, etc.	

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

why	whale	wheel	when	where	which	whether
way	wale	weal	wen	ware	witch	weather
whig	while	whin	whine	whit	white	whither
wig	wile	win	wine	wit	wight	wither

WORDS CONTAINING ELEMENTS OF DIFFICULTY.

Wharf, whelm, whiff, whiffle, whim, whimper, whim-wham, whip.

W.

This letter has been called a Vowel by some orthoepists,—by others a Consonant,—and by others both a vowel and a consonant. When W occurs before a vowel, it is unquestionably an *Articulation*; and in other situations, it is either a redundant letter, as in *flow*, or an auxiliary mark to make up the writing of some sound which has no fixed symbol. The combination *aw*, for instance, sounds 10 as in *saw*; *ew* sounds 12 as in *sew*, and 13 as in *grew*; *ow* sounds 12 in *flow*, and 7-13 in *now*, etc. The only regular sound of W is that of the initial articulation.

In forming W, the lips are very closely approximated,—but *not necessarily projected*—and an effort of *voice* is made, which produces a sound resembling *oo*, but with a more contracted aperture; and the articulation is finished by the smart recoil of the lips to give egress to the succeeding vowel.

When W is before *oo*, the combination is rather difficult, from the little scope the organs have for the articulative action; the *w* is in consequence often omitted by careless speakers, *wool* being pronounced *ool*,—*woman*, *ooman*, etc. The following experiment will clearly show what the formation of W really is. Sound the vowel *oo*, and, with the thumb and forefinger, momentarily approxi-

mate and again separate the middle of the lips during the continuance of the sound, and the word *woo* will be pronounced. After a little exercise, the lips will be able to originate the necessary action, and perform it with precision and rapidity.

W and *wh* occasion many a difficulty to the Stammerer. Sometimes the seat of the impediment lies in the production of *voice* in the *w*; sometimes in the junction of the articulation with the succeeding vowel. The Stammerer, blind to the principle that articulations are made by *disjunctive* actions, jerks his chin forcibly *upwards*; the lips meet and close upon each other, in struggle; while the head, eyes, and whole body, partake of the effort, and undergo a paroxysm of convulsive action; and it is not until the face is reddened with the straining, and the chest almost collapsed, that the sound ungovernably rushes out.

The cure of this distressing impediment must be founded on the clear conviction that *the lips cannot produce the sound*—that they *only modify it*, gently and instantaneously; and that consequently, any effort thrown into them is unnatural, and must be a cause of difficulty. Let the Stammerer but observe the mechanism of *W* from the vowel *oo* in the way above described, and the hold of the impediment will be at once greatly loosened. Guarded practice and careful application of the principle of its articulation will soon obviate the difficulty which this element presents.

The 7th vowel is never heard after *W* in English. The contracted labial aperture for the articulation would render its combination with so open a vowel abrupt and harsh; and the more congenial formation No. 10 (*aw*) is used instead. All the other vowel-sounds occur after *W*. No articulation ever follows it, in English.

Wr is a digraph retained in our orthography, but the *w* is not sounded. The combination is, however, perfectly practicable, and it was no doubt articulated in the earlier ages of our language. In the Scottish dialect, both letters are still often heard in such words as *wretch*, *wright*, etc.

W combines with the initial articulations, B, D, G, T, K, Th, S, as in *buoy*, *dwindle*, *guava*, *twice*, *queen*, *thwart*, *sway*.

In the *French* language, W follows almost all the articulations: it is heard after R in *roi*, after F in *fois*, L in *loin*, M in *moi*, N in *noir*, P in *poid*, V in *voir*, etc,

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

wooes	buoy
ooze	boy

WORDS CONTAINING ELEMENTS OF DIFFICULTY.

Wafer, waft, warfare, weave, weep, weevil, wife, wipe, wives, wigwam, wolf, woman, womb, women, woof, wove.

F.

F is formed by apposition of the middle of the lower lip to the edges of the upper teeth, followed by the rapid withdrawal of the lip to finish the articulation. The breath must not be stopped during the organic contact. The obstruction offered by the lip, however, gives the breath sufficient compression in the mouth to produce a degree of percussiveness when the lip is removed. We have already spoken of the necessity of attending carefully to the labial action, so as to avoid redundancy or ungracefulness. An awkward formation of F and V is so common as to render a repetition of the caution here necessary. The lip is frequently *rolled outwards*, so as to bring its interior surface against the front of the teeth; and the

upper lip is twitched up towards the nostrils, to avoid collision with the clumsy usurper from below. The mouth is sadly deformed by these ungainly actions, and the wriggling lips look in profile like a couple of "uneasie worms," twining in agony. There is nothing in the mechanism of F, or of any articulation, or in any combination of sounds in speech, that requires these loose and protrusive actions of the lips; they should be studiously avoided by every person of taste. The lips should, in all their actions, retain as nearly as possible, the form of the dental ranges. For F the upper lip should have no motion; and the under lip should merely rise sufficiently to bring its edge against the tips of the upper teeth. A too labial formation of the vowels *aw*, *o*, *oo*, creates an awkwardness in articulating F in syllables containing these vowels;—as in *awful*, *wolfish*, *uvula*, *over*, etc.

Redundancy of labial action in forming F, aggravated by the upward pressure of the jaw, creates a trying difficulty to the Stammerer. F, properly continuous, becomes perfectly obstructive, and acquires all the difficulty of P, with a more awkward position of the lips: for the lower lip frequently forces its ascent to the upper gum, and wedges itself in between that and the upper lip.—But Error is too various to be traced in all its vagaries; and the erroneous actions of Stammering are so eccentric as to present new features in almost every case. Let the true principles of articulation be investigated, and brought in contrast with *any error*, and, if the source of the error be not at once made apparent, the means of removing it will, at least, be so.

F is sometimes formed by the close approximation of both lips, instead of the lower lip and upper teeth: but the tension of the lips necessary for this formation is

ungraceful and fettering to the general maxillary action. A loosely formed P sounds like F, by the breath not being perfectly intercepted.

EXERCISE.

ap fa af pa pa fa fa pa pa fa pa fa pa fa
 pif pip fif fif

F and Th sound very much alike. F is *labio*-dental, and Th *lingua*-dental;—and the manner of their formation is precisely the same, namely, a *continuous breathing* between the apposed organ and the teeth, followed by the quick removal of the articulating organ.

Breath Articulations are frequently vocalized before Vocal ones, and between vowels: thus, *ph* is sounded *v* in *nephew* and *Stephen*. Careless speakers pronounce *if* like *iv* in such situations, and *of* is always pronounced with *v* instead of *f* (*ov* or *uv*); but this change has perhaps been sanctioned for the purpose of distinguishing the word from *off*.

F *initial* combines with *l*, *r*, and *y*, as in *flight*, *fright*, *fury*. In French it combines also with *w*, as in *fois*. F in English unites with no initial articulation, except S, as in *sphere*.

WORDS CONTAINING ELEMENTS OF DIFFICULTY.

Faith, falsify, fame, fathom, favour, feather, febrifuge, feeble, feoff, fervour, fib, fifty, flap, flippant, fop, frippery, froward, fume, muff, phenomenon, phlebotomy, phosphorus, puff.

V.

This articulation adds to the action of F a *vocal sound*. With this difference of sonorous quality, F and V are in every respect the same. Our remarks on the articulation

of F will therefore equally apply to V. V is liable, however, to another kind of mispronunciation in the absence or but partial presence of voice. The clear vocality of the voice articulations is a source of much beauty in speech; and the vocal vibration should not subside until the disjunctive action which completes the articulation is made. All vocal articulations are more or less capable of *Inflexion*—the *continuous* formations especially so,—and much of the effect of an expressive voice lies in the varied intonation of these elements.

Londoners often pronounce *w* instead of *v*, and, with strange perversity, *v* instead of *w*. Thus we hear *wessel* for vessel, and *vater* for water; *werry vell* for very well, etc.;—but of course only or mainly among the uneducated.

Rapid alternations of W and V are organically so difficult—not to Stammerers only—that they form a useful exercise to bring the lips under control.

EXERCISE.

va wa wa va va wa va wa va wa

As a general exercise on the Labial Articulations, the following arrangement of the Three Modes of action will be useful. Reiterate the combinations rapidly.

EXERCISE.

wa ba va	va ba wa	ba va wa
wiv bib	wib viv	biv wiv

V initial combines only with *y*, as in *view*. *Vr* is a peculiar *French* combination, as in *Vraie*.

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

vain	van	vast	vault	veal	veer	veil
fain	fan	fast	fault	feel	fear	fail

very	vetch	view	vile	vine	voiced	vase
ferry	fetch	few	file	fine	foist	phase
five	rive	save	serve	wave	wive	
fife	rife	safe	serf	waif	wife	

WORDS CONTAINING ELEMENTS OF DIFFICULTY.

Immovable, movement, thief, throve, valuable, vamp, vapid, velvet, verb, verify, viper, vivid, vivification, vivify, vociferate, voluble, volume, vomit, votive, wove.

Th—as in *thin*.

This articulation is that which gives the most forward action to the tongue, the front edge of which rests equally and lightly against the inner surface or edge of the upper teeth, while the breath escapes over the sides of the fore-part of the tongue. The breath must not be obstructed, or a thick and indistinct T will be produced. The *necessary mechanism* of Th is simply obstruction of the breath by the *tip of the tongue*, and a lateral passage for the breath (on one side or both sides) over the fore-part of the tongue. The tongue *may* lie either between the teeth,—on the upper teeth,—on the gum,—or even on the rim of the palatal arch; and the sound of Th will be produced if the issue of the breath be in the way described.

The second of these is the proper formation, as it is that which most readily combines with other lingual movements. The first formation,—namely, the placing of the tongue between the teeth,—is a very common mode of untutored articulation; and frequently the “unruly member” is fulsomely protruded, as if lapping the air. School-boys have a way,—often a painful one,—of curing this vice, by striking the chin upwards, and making the teeth bite the obtrusive member. Yet the number of

speakers who continue thus to thrust their tongues into unnecessary observation, shows that the *biting specific* is either not very generally adopted, or not of permanent efficacy; and the adult organ often rolls in luxurious ease upon the dental pillows, and stretches itself out even to the softer lip, as if rejoicing in full-grown security from the terrors of “chin-whack.”

Another faulty formation of Th consists in a movement of the lower lip inwards to meet the tongue. This gives so much of the character of F to the articulation, that it is often difficult to know which is the letter intended. F and Th are mechanically much alike. The action of the *lip* for F is precisely analogous to that of the *tongue* for Th. Both organs partially obstruct the breath by central contact with the teeth; and the breath is in both cases emitted through lateral interstices. The following Exercise on the actions of F and Th will give distinctiveness to these elements.

Pronounce—not the *name*, but—the articulate *sound* of the letters F and Th, without an intervening vowel. Dwell for some seconds on the F, keeping the whole range of the *upper teeth* in sight, then quickly disengage the lip, and place the tongue in the position for *th*, resting in this position with *both ranges of teeth* in sight for a few seconds; then withdraw the tongue energetically, and assume the position for F, as before: and so on alternately, till the actions can be reiterated with rapidity.

EXERCISE.

f-th-f-th-f-th-f-th-f-th-f-th, etc.

fa tha fa thafa fith tha fa tha fatha thif

Th is sometimes sounded instead of *s*: this constitutes one form of the defect called *Lisping*. Combinations of

th and *s* present an articulative difficulty which should be mastered by careful practice. (See S.)

A voiceless L is a common substitute for *Th* among children; and even older tongues will sometimes be found to utter the cacophony. Nothing can be more simple than the cause of this error, and the means of its correction.

Th is not heard in *French* or *German*: the digraph is *written*, but it is pronounced *t*. Foreigners generally have so great a difficulty in articulating the English *Th*, that it is a rare thing to find one of them so far naturalized to the English tongue as to be capable of uttering this shibboleth. The difficulty arises only from ignorance of the nature of the formation; just as the Englishman's difficulty in giving the Gallic effect to the French *semi-nasal elements* is the result of a want of knowledge of the true mechanism of these sounds. A clear understanding of the formation of the peculiar elements would make their easy production the work of half an hour's practice.

To the Stammerer *Th* presents another source of impediment besides those already noticed. This lies in the action *of the tongue*. The heavy *conjunctive* force of the articulative action, impels the tongue with unmanageable pressure against the teeth, till it is either protruded from the mouth, or rolled up behind the lower teeth, so as to occasion a complete blockade. The mere occlusion of the mouth would not necessarily lead to difficulty, for many of the articulations are perfectly obstructive; but *continued pressure* creates impediment. The organs must in all cases start off from their articulating positions with lightness and rapidity. The tongue in forming *Th*, for instance, takes its articulative *position* against the teeth, as above described; but the articulative action — without

which the element is incomplete—is a smart *recoil* of the tongue, so as perfectly to separate it from the teeth.

It is an important general principle of lingual articulation, that the point of the tongue should always be directed *upwards*, or at least *horizontally*. *It should never touch the lower teeth*, and it should *never descend into the lower jaw*. In practising the recoil from the various articulating positions to lighten a heavy lingual action, the movements should be carefully watched before a glass; and if the *string of the tongue* (the frænum) be always kept in sight, the protrusive and downward habits of impeding action will soon be subdued. The muscular power of the tongue may be so greatly increased by exercise, and brought under the control of the will, that in a mechanical sense the lingual organ certainly cannot be called an “unruly member.” We have often in a few days *drilled* into activity and precision of action, a tongue which formerly lay lumpish and inert in the mouth; and the *apparent bulk* of the tongue has been so reduced by the exercise, that, instead of being, or seeming to be, too large for the mouth, it has learned to stow itself within the ample cavity, almost out of sight. Very rarely does the heaviest and hughest looking tongue need more than such a drilling to give it nimbleness and tapering elegance.

When the formation of *Th* is from any cause imperfect, let the following practice be pursued. Place the tongue carefully in the articulating *position*, and continue it steadily there for some seconds: then quickly withdraw it, by one action, as far *back* and *down* in the mouth as possible, with *its under surface* kept in sight. The finger may be placed at the angle of the neck and chin, and the descent of the tongue should be distinctly *felt*. In a short time, *lingual power* will be so developed, that not only

Th, but all the elements produced by the agency of the tongue, will be greatly improved.

Th, though a double character, is a simple articulation, and should be represented by a single letter in the alphabet. *H*, the sign of aspiration, is added to *P*, to represent a *continuous* formation by the lips, viz. *F*; and it is on the same principle added to *T* and *S*, to represent continuous formations by the tongue, viz. *Th* and *Sh*. In some languages, we find other combinations with *h*; in Gaelic, for instance, *Bh* and *Mh*, which sound *V*; but *Mh* has this peculiarity, that it gives a *nasal* effect to the *adjoining vowel*.

The vowels exhibit a tendency to prolongation when before *Th*; for the articulation being *continuous*, and its seat far advanced in the mouth, the vowels cannot be so readily stopped by it as by obstructive and posterior formations. The words *path*, *bath*, etc., illustrate this tendency.

Th initial unites in English with *w*, *r*, and *y*, as in *thwart*, *throne*, *thews*. It blends with no initial articulation.

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

death	thought	loth	oath	ruth
deaf	fought	loaf	oaf	roof
sheath	thew	thief	thigh	thill
sheaf	few	fief	fie	fill
thin	thirst	threat	three	thrill
fin	first	fret	free	frill

WORDS CONTAINING ELEMENTS OF DIFFICULTY.

Fifth, sixth, eighth, ninth, twelfth, breadth, depth, length, width, faithful, healthful, plinth, thirtieth, thistle, thoroughfare, thrift, thwart, truthful.

Th—as in *then*.

This is the same articulation as the preceding, but with the addition of voice during its formation. There is no distinction made in our Orthography of these elements, but the difference between the sounds is the same as between F and V, P and B, etc. Thus not only is our alphabet deficient of simple characters to represent this and the preceding element, but we confound the two sounds by using for both the *same digraph*. To be consistent, we should write this sound *Dh*.

Our remarks on the formation of *Th* (breath), and on the difficulties and peculiarities of its articulation, equally apply to the *vocal Th*; and the exercises recommended for the former will, with *voice* added, be equally effective for the correction of faults in the latter. In forming this element the voice should be clear and flexible; though, from the interstitial nature of the apertures through which the breath passes, a degree of *hissing* will at the same time be heard. The *retraction* of the tongue which finishes the articulation should not be followed by any sound of voice. This is an important *general principle* of articulation; for, if a vocal sound escape after the articulating organs are disjoined, it must evidently be a *vowel*; and this addition,—by no means uncommon,—gives a drawling, “humming and hawing effect” to speech, which is most disagreeable to the listener.

Custom has *vocalized* the *th* in the plural of a few words which have the breath *th* in the singular: as in path—*paths*, oath—*oaths*, mouth—*mouths*, bath—*baths*, lath—*laths*. The reason of this change does not seem very obvious; for it is just as easy to pronounce *ths* in these cases as *thz*. A similar change, however, takes

place in F, which is vocalized from *calf* to *calves*, *loaf* to *loaves*, etc. The analogy between the mechanisms of F and Th (already explained, page 176), may account for these elements being thus correspondently influenced.

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

clothes	lathe	lithe	nether	oaths	than
close	lave	live (adj.)	never	owes	van
that	thine	thou	withe	withes	writhe
vat	vine	vow	wive	wise	rive

WORDS CONTAINING ELEMENTS OF DIFFICULTY.

Blithely, gathereth, litheness, loatheth, loathsome, mouths, paths, sheatheth, soothest, therewith, thither, wreaths.

S.

The peculiar mechanism requisite to produce the clear hissing sound heard in this letter, is a *single* and *very contracted aperture* for the emission of the breath over *the centre of the fore-part* (not the tip) *of the tongue*, when, without much elevation from the bed of the lower jaw, it is closely approximated to the upper gum. The tongue is otherwise *in contact* with the teeth and gum, so as to obstruct the breath at all parts but the point, which is sufficiently squared to prevent its touching the front teeth. The slightest *projection* of the tip brings it against the teeth, and, by partially intercepting the breath at that point, modifies the sound into that of *th*; and the least *retraction* of the tongue from the precise point of the true formation, causes the middle of the tongue to ascend towards the arch of the palate, and modifies the current of breath into the sound of *sh*. No element of speech is so often and so variously faulty as S, and yet there is

rarely much trouble required to correct its irregularities. Among the most common imperfections of this sound, we may note *four leading varieties*.

The first is caused by *contact of the tongue with the teeth*, or its projection between the teeth. This produces the sound of Th. Some people reckon this a *fascinating charm*,—especially in maiden mouths,—a mark of guileless innocence and simplicity; because, forsooth, the “*thame thweet thort of thound*” is often heard in the innocent prattle of childhood. There can be but one opinion as to its puerility; it is therefore an unbecoming habit in those who have outgrown the years of childishness.

Another form of defective S arises from the *flat expansion of the tongue over the lower teeth*. This is a lazy-looking and peculiarly unprepossessing fault. It is too much allied to the aspect of imbecility to be tolerable from any other cause.

In a third form, the *point of the tongue is depressed behind the lower teeth*, and the breath hisses between the elevated *middle* of the tongue and the palate. In this case, the teeth are *too much apart* to allow of sufficient sharpness in the sound; and *the lower lip* is frequently employed to direct the stream into a narrower channel, by rising towards the upper teeth. By these means a very close resemblance to the sound of S is produced; and if we could not *see* its mechanism, we might pass it without notice, but it is so conspicuously deforming to the mouth, that we are glad to turn our eyes from the speaker's face. These defects are commonly called, indiscriminately, by the general name of LISPING.

Another cacophonous substitution for S is a hissing *over the sides of the back of the tongue*, like the breath form of L, which is heard in Welsh, and represented in that

language by Ll. This is a clattering disagreeable sound ; and it is generally accompanied by other faults of lingual action. The inarticulate confusion of speech which results is commonly called "*thickness.*"

With reference to the method of correcting these and other imperfections, we would be less careful to point out the exact cause of the defect, than to illustrate the true mechanism of the sound which is defective ; and, by exercises on *analogous and kindred formations*, to induce the organs to fall into the unaccustomed position, *unconsciously* and unexpectedly on the part of the pupil. In this way, the association between the letter and the malformation is most readily broken, and the new form of articulation fixed into a habit.

The analogy between the articulative actions of R and S is generally of much service in leading the tongue to the position for the latter element. A whispered R may be modified into S, by bringing the *teeth* as close as possible without actual contact, and depressing the tip of the tongue to a *horizontal position*, during the flow of the breath. Sometimes mechanical assistance facilitates the acquisition of the S ; a *paper cutter* held between the teeth furnishes a convenient *ledge* on which the point of the tongue may lie until it acquires the power of adjusting itself to the required shape.

We have hitherto described only the articulating *position* of S,—but the element is not finished without the *retraction of the tongue* from that position. The energetic practice of this part of the articulation will greatly tend to give ease and rapidity in executing the S, and in managing the tongue in the various evolutions of speech.

Another improving exercise consists in stopping the hissing sound of S, by repeated appulses of the tongue

against the palate,—producing the combination *st-st-st*, etc. The action of the tongue from S to T should be *backwards and upwards*:—a common heaviness of speech arises from striking the tongue *forward* to the gum or teeth, or from simply pressing it upward, *without a change of position*. In the combination *st* (and *sts*, which the quick reiteration of *st* produces also) there are few persons who exhibit distinctness and lightness of articulation. A little careful practice will give facility to all who desire that their speech shall be something more than a “mere brute instinct, by which,” as Dr. Rush remarks, “some persons only bleat, bark, bray, whinny, and mew,—a little better than others.”

St is common in English, both as *final* and as an *initial* combination. Such awkward clusters of consonants as in the following words are of frequent occurrence:—*fits and starts, tastes and distastes, states, statist, statistics.*

Similar combinations of S with P and K are likewise very common; but they do not present so great a difficulty as the preceding, because the obstructive elements are produced by the action of a different part of the mouth from that which forms the S.

EXERCISE.

ast sta	ast stast
asp spa	asp spasp
ask ska	ask skask

S and Th present an articulative difficulty when they meet without an intervening vowel. The action of the tongue from one to the other of these elements is exceedingly limited—but it must be firm and decided, to render the combination distinct. The change from the position of S to that of Th, consists in *tapering* and *advancing* the *tip of the tongue*. The *whole tongue* must not be *pushed*

continuously forward, but the *mere tip* should *just touch* the teeth—as high as possible. Let the student endeavour to produce a long series of these elements alternately.

EXERCISE.

s-th-s-th-s-th-s-th-s-th-s-th-s-th, etc.

Syllables containing S and Th alternately initial, should also be practised. The difficulty they present, renders them well worthy of the student's care: for in overcoming this difficulty a great degree of *organic power* is gained, which must produce a beneficial effect upon articulation generally.

EXERCISE.

āce thā	ās thās	tha sa	tha sa tha	thith sis
āith sā	āth sāth	sa tha	sa tha sa	sis thith

When S final comes before S initial, as in "The Alps sublime," the neat articulation of the double consonant requires a little art.

The difficulty of doubling articulative actions without awkward hiatus has led many Elocutionists to advise the omission of one of the elements in such combinations. Whoever could rest satisfied with saying "the Ethiopian's *kin* and the leopard's *pots*," when he meant "the Ethiopian's *skin* and the leopard's *spots*," may follow the tasteless counsel; but we trust all others will rather spend an hour in drilling the organs into lightness of action, or else—be distinct, even at the expense of hiatus.

S is an extremely difficult articulation to Stammerers. In general, they have no difficulty in producing the hissing sound; they can take the articulative *position*, but they cannot add to that the necessary *action* to finish the element, and connect it with the succeeding vowel. The

hissing is thus continued till the lungs are almost exhausted. The fault here lies mainly with the glottis, which, in a non-vibrating position for the S, will not take the vocalizing posture for the succeeding vowel with sufficient readiness; and the chest aggravates the impediment by bearing down heavily upon the lungs, while probably the ungovernable jaw adds its share also to the difficulty. General practice on the actions of the various *organs* implicated in the defect, furnishes the only sure ground of cure. When the power of governing these has been in some degree acquired, exercises on the special articulations will be of service; but until the chest and glottis—the *producing organs*—are brought under voluntary control, it will be of little use to practise the merely *modifying* actions of articulation.

The English language has been called the “hissing tongue,” as if, more than its neighbour languages, it abounded with this serpent sound. The removal of S from some of our combinations might certainly add to the euphony of our speech; but a comparison either of *letters* or *sounds* with the French, Italian, and Spanish languages, will show that the English is far from having the unenvied distinction. We have taken the trouble to compare some passages of equal length in these four languages, to ascertain the number of the hissing elements S and Z, actually pronounced in them, and the following is the result. In a *French*, *Spanish*, and *English* translation of the same passage—there were found to be in French, 60, in the English, 65, and in the Spanish, 110 of these sibilants actually *sounded*. In the *French* paragraph there were 93 sibilant *letters*, while in the *English* one, there were only 77.

Still further to test this, we took a passage in *Italian*,

containing the same number of words as in the *Spanish* portion, and found, even in this smooth euphonic tongue, a preponderance of 5 of these sibilants over the number contained, in our decried English: which is thus proved to be “more hissed at than hissing!”

S initial combines with P, T, K, F, M, N, L, W, Y, as in *sport, store, scope, sketch, square, sphere, smile, snow, slow, swear, sue*. The combination *sy* as in *sue, suit*, etc., is difficult to unaccustomed organs, which are apt to substitute *soo, soot*, etc., or *shoo, shoot*, etc., for the more elegant and the correct pronunciation *syoo, syoot*, etc. S enters into combination with no initial articulation in English utterance. In such words as *psalm, psychology*, etc., the *p* is therefore silent.

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

cess	erse	face	force	gas	kiss	lease
saith	earth	faith	forth	Gath	kith	Leith
looser	moss	mouse	pass	race	souse	
Luther	moth	mouth	path	wraith	south	

WORDS CONTAINING ELEMENTS OF DIFFICULTY.

Assassins, assesses, asks, asps, assists, busts, ceases, costs, cystus, desks, discuss, feasts, fifths, necessities, necessitous, sashes, sassafras, sauces, saucers, see-saw, scissors, Scotch, scratches, seethe, seize, sessile, sixths, sloth, snatches, sneeze, sources, sphinx, splash, squash, statics, statist, statistics, statutes, success, such, sues, suicide, suscite, system.

Z.

This element unites a *vocal* sound with the hissing of S. The articulative position and action of Z are in every respect the same as those of S. Both letters are conse-

quently liable to the same kind of defects, in lisping, etc. ; and the exercises prescribed for S, will, with voice added, be equally effective in perfecting Z.

EXERCISE.

thaza	tha za tha	za tha va	tha va za	va za tha
zatha	za tha za	za va tha	tha za va	va tha za

Z is generally less difficult to the Stammerer than S, on account of the vocal sound in the articulation which renders its junction with a following vowel comparatively easy. But the buzzing sound of Z is apt to be feeble and intermittent, and in this case all the difficulty of S will be experienced. Glottal power must first be acquired in the formation of clear and firm vocality, and the chest restrained from undue pressure in expiration. The tongue will soon be trained to finish the articulation with lightness and without interrupting the voice, if the principles of lingual action be clearly understood and carefully applied.

The letter S has the sound of Z after all voice articulations, except (in a few words) *m*, *n*, *l*, and *r*, as in *temse*, *tense*, *else*, *hearse*, etc. S between vowels also is very generally pronounced Z, as in *visit*, *reason*, etc.

Z initial combines only with Y, as in *zeugma*. It joins with no initial articulation.

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

abuse (v.)	analyses	avers	baize	cars	close (v.)
abuse (n.)	analysis	averse	base	carse	close (adj.)
cores	curs	dies	diffuse (v.)	doze	dues
course	curse	dice	diffuse (adj.)	dose	deuce
ells	eyes	fours	grease (v.)	hens	hers
else	ice	force	grease (n.)	hence	hearse
his	house (v.)	Jews	lies	lose	pays
hiss	house (n.)	juice	lice	loose	pace

pews	rués	saws	says	seize	sores
puce	ruse	sauce	cess	cease	source
sows (n.)	Thames	vies	zeal		
souce	temse	vice	seal		

WORDS CONTAINING ELEMENTS OF DIFFICULTY.

Jesuit, schism, spasms, xyst, zest, zeugma, zigzag.

R.

This element is produced when the breath is directed over the upturned tip of the tongue, so as to cause some degree of lingual vibration. In order to effect this, the breath must be obstructed at all other points, that the force of the stream may be concentrated on the tip; and the tongue must be held loosely, to enable it to vibrate readily. The vibration may be produced in every degree from the soft tremor of the English R, which merely vibrates the *edge* of the tongue, to the harsh rolling of the Spanish Rr, which shakes the whole organ. The trilled or strongly vibrated R is never used in English; but there are various degrees of vibration which characterize the English R in different situations.

Between vowels, as in *merit*, the R is strongest, but it has only a momentary tremor; for articulations between vowels are always short in English. R is never, like *n* or *l*, prolonged when two articulations meet in a compound word; (as in *meanness*, *fouly*, etc.;) the reason is, that R final is differently formed from R initial, and both letters have their regular formation in this position; as in *wi-re-wrought*, *rear-rank*, etc. R initial has the articulative vibration,—but only of the edge of the tongue.

When the tongue is raised just enough to mould the passing stream of air but *not yield to it*, we have the condition for the *final R*. The aperture for the emission of

the voice is so free that the vowel quality of the sound is scarcely,—if at all,—affected. When the succeeding word, however, begins with a vowel, the final *r* has generally the effect of *medial r*, to avoid hiatus—as in, *her own, or else*, etc.

A description of the Final r (the 8th vowel) will be found at page 136.

No letter is more frequently faulty than R. The extremes of error are to throw the articulation back to the *uvula*, or forward to the *lips*; but these are found in all degrees of modification and combination. The sound of the former R, when roughly executed, as we often hear it, is like the snarling of a cur:—the latter formation produces the effect of W—with which more or less of the guttural modification is generally combined.

The *uvular vibration* constitutes what is called *burring*,—a fault almost universal in some of the northern divisions of England. Ask a person who *burrs* to open his mouth, and you will see the little uvula dancing and leaping in the channel of the tongue. To cure this fault, the first care must be to keep this restless little organ out of the way. There would be but little difficulty in getting sufficient vibration of the point of the tongue from a few very simple exercises; but we should still have the *guttural* effect remaining. The Burrer should therefore exercise himself in separating the uvula and soft palate from the tongue as far as possible. After a little practise, he will generally be able to do this so effectually, that the uvula will shrink to a point, and the soft palate will form but one arch instead of two.* When he can retain the organs in this position at will, let him commence his practice to acquire the new articulation, *by very gradually raising the*

*See the back part of the Mouth.

point of the tongue, during the prolonged utterance of the open vowels *ah* and *aw*, till it comes upon the palate obstructively, and so forms the letter D. If the under jaw be kept still, it will be almost impossible to carry the tongue slowly upwards without sounding an R during the progress of the tongue to the palate. The tongue should then be stopped at an intermediate elevation, while the voice is continued, and the teeth and lips are kept perfectly motionless. When some power of action in the tongue has been thus acquired, strike it upwards quickly and repeatedly during the flow of voice; and, probably, a very tolerable R will be at once produced. Further improvement will then be gained by the following exercise. Sound Z with the edge of an ivory paper cutter between the teeth; and, during the continuance of the sound, gradually open the teeth till they admit the *breadth* of the paper-cutter between them. The effort to continue something like the buzzing sound of Z, while the teeth come apart, will draw the point of the tongue backwards and upwards almost to the position for R initial; and the sound thus produced may at once be used as initial R in practising words beginning with that letter. At first it may sometimes be necessary to give the subsequent vowel a separate commencement, by a momentary pause after the R,—thus, r-each, r-ide, etc., to prevent the possibility of habit foisting in a little of the old guttural vibration between the new R and the vowel. Fluency of connexion will very soon be gained, and the roughest Burr may be, by these means, perfectly cured.

R is a very harsh letter in the mouth of a Scotchman. This forms one of the points by which a Northern utterance is most readily detected in England; for few Scotchmen get over their vernacular habits in forming this letter.

Yet there is no reason why they should not. If the true formation of the English R be understood, and the difference between it and the Scottish R clearly apprehended, any one may soften a rough R almost at the first effort. There is not the slightest difficulty when the principle of formation is known.

There is a difficulty, however, to unaccustomed organs, in producing a rolling or vibrated R. Many persons cannot, from want of lingual power, attain it. If the tongue is too much tied to the bed of the jaw, *burring* will arise from the effort to make the rough R; and a *labial modification* of sound, something like *w*, will be produced by the attempt at the smoother sound. This latter peculiarity would almost appear to be *cultivated* among affected English speakers:—it is too common to be accidental. “*The wuffness of the awwdinary aww*,” these sonorous reformers seem to say, “*wendews its ewadication fwom wefined utterwance desiwable and weally necessawy.*”

An easy method of developing vibratory power on the point of the tongue, is to repeat, with open mouth, and with the utmost *softness* and *rapidity*, articulations of the letter D. Thus, *de-de-de-de-de-de-de*, etc.; or, *idididididid*, etc.

R is difficult — often peculiarly so — to the Stammerer. The breath pours out from the open channel with destructive impetuosity, and the waste of the material of speech induces a series of efforts in head, and chest, and limbs, to supply the place of the ungovernable agents of utterance. When the Stammerer has brought the *valve* of the throat — the glottis — under due control, he will have but little difficulty in restraining the pressure of the chest, and completely obviating all the distressing distortion of the impediment. He must carefully study the mechanism of R, and enounce the sound, if necessary, *separately* at

first, to break the association between it and the stammering paroxysm. A little practice will render this expedient unnecessary, and enable him to effect its combination with fluency.

R final is, we have said, so purely vocal, that it can hardly be reckoned an articulation. The student, desirous of acquiring the smooth pronunciation of this English element, should practise words terminating in *r*, *re*, or *er*, giving to the *r*, etc. the vowel sound of *i* in *sir*. Let him at first sit before a glass, and, while he sounds this vowel, observe that the tongue rises very gently ; but not so much as to create a hissing of the breath, or vibration of the tongue. If the vowel *ah* be sounded for *r* final *with an observed elevation of the point of the tongue*, the English element will be very speedily perfected. Uneducated Cockneys pronounce *ah*, *without this lingual elevation*, and say *sah* for *sir*, *heah* for *hear*, etc.

An English peculiarity not confined to Cockneys, or to the uneducated, is *the insertion of an R between vowels*. Thus, when one word ends and the next begins with the open vowels 6 or 7, the tongue strikes glibly up on the palate, and gracelessly obviates hiatus, by interposing an *r*. "*Is papa r at home ?*" "*What an idea r it is !*" This obtrusion is only heard after these open vowels ; the formative apertures of which are but little different from the aperture of the English *r* (8). Thus we never hear "*Go r away*," "*I see r it now*," because the final vowel in the first word does not leave the tongue in a position for the easy formation of R, which is never pronounced without the open vowel effect (No. 8) after long vowels. This interpolation of R is one of the most inveterate of all habits of speech. The only cure is to finish the first vowel by a momentary occlusion of the glottis ; and thus

give the subsequent vowel a separate commencement. Children may easily be prevented from falling into this habit. Prevention is better than cure.

R and L are very liable to be confounded when they occur in proximate syllables. The vocal aperture for the former is over the point of the tongue, and for the latter over the sides of the back part of the tongue; and there is a difficulty in passing quickly from one to the other of these positions: thus in the sentence, "*Little Richard wrote a letter; look at the letter little Richard wrote,*"—or in the quick reiteration of "*a lump of raw red liver,*" etc., few persons will avoid some confusion of the R and L. A similar difficulty presents itself in such words as *literally, literary, literarily*, etc.

On all such *organic difficulties* highly useful exercises may be arranged. The following will be found beneficial in giving power and precision of action to the tongue.

EXERCISE.

ra la	la ra	ra la ra	la ra la	ra la la ra	la ra ra la
		ril rin	ril nil	rin lin	

R *initial* receives no articulation in combination with it in English. In French we find *rw*, as in *roi, roideur*, etc.

R unites with the initial articulations P, B, F, Th, Sh, T, D, K, G, as in *pretty, bride, freeze, three, shrink, try, dry, crime, grief*.

W seems to have been at one time sounded before R; it is still written, and in Scotland we frequently hear it pronounced by old people in such words as *wretch, wrong, write, wright*, etc. It has been noticed that *w* is often sounded instead of R as in affectation.

WORDS CONTAINING ELEMENTS OF DIFFICULTY.

Aerial, airily, auroral, crural, drollery, granary, honorary, horary, laurel, literally, literary, literarily, lyrical, orrery, plural, prurient, raillery, rarity, real, recklessly, regally, regularly, reiterate, re-resolve, revelry, roarer, roller, rookery, ruler, rural, sorrily, stroller, truly, verily, warrior, warily.

L.

This is the most clearly sonorous of all the articulations. It is formed by a uninterrupted current of pure voice, flowing over the sides of the back of the tongue—and little if at all affected by vibrations of the apertures through which the sound passes. The fore-part of the tongue is in contact with the rim of the palatal arch, and laterally with the teeth. This is the articulating *position* of L, and were there no subsequent *action* necessary to complete the element, L would be simply a *vowel*. But the oral aperture is changed by the removal of the fore-part of the tongue; and this action constitutes the letter *an articulation*. The *nasal* elements, as elsewhere noticed, (see N) have a similar vowel-vocality;—with them as with L, it is the removal of the apposed organs which constitutes the letters Articulations. This accounts for the syllabic function which these elements perform in such words as *saddle, kettle, mutton, sadden*, etc., where *l* and *n* without any vowel sounded, form distinct syllables.

The formation of L is very often faulty—sometimes from the apertures through which the voice flows, being contracted so as to cause a degree of vibration on the sides of the tongue; sometimes from the breath not being perfectly intercepted by the point of the tongue;—sometimes

from the tongue being too thickly pointed—and not sufficiently *spread out* in front—so that the breath escapes too far forward, and by too elongated openings;—often from the tongue habitually taking the unfavourable position of turning its tip downwards to the bed of the jaw,—thus causing the rounded back of the tongue to rise into the palatal arch—and depriving the articulation of the clear, sharp, and percussive effect of the removal of the obstructing fore-part of the tongue;—sometimes from *rounding the lips*—either with or without the lingual action—so as to modify the voice almost into *oo*, or *W*; as “*the wady is weh-oo*,”—(*the lady is well*;) and, in not a few cases, from making the articulative position perfectly obstructive, and passing the sound *through the nose*—with the effect of *ng*, or a modification of nasal quality, between that of *ng* and *n*. These and other minor diversities of mal-formation of this most mellifluous element, are remarkably common.

A Scotch peculiarity consists in prefixing a vowel sound,—nearly that of *u* (9) to *L*; the *l* being thus made to sound almost like *ul* in *ultimate*. This is not heard when *L* is initial, but when a vowel precedes the *l*, as in *ale*, *sell*, etc. pronounced *a-ül*, *seh-ül*, etc. When *L* should make a separate syllable, as in *mettle*, etc., the same sort of sound is frequently heard. There is a greater tendency to this fault when *L* follows the close, than when it follows the open vowels. There is indeed an *organic preference* for the interposition of some open vowel between *e* (1) and *l*, arising from the difficulty of shifting the tongue rapidly from its lumpish position at *ee* to the very different expanded attitude of *L*; as in *feel*, *field*, etc. The incombinable nature of these formations is seen also in the want of fluency in the junction of *L* with the *y* of *ü* (=yoo). When *L* and *ü* occur in one syllable—the tongue would

fain pass over the *y*, and pronounce *lure* and *lute* simply *loor* and *loot*; but polite usage forbids this, yet authorizes a compromise of the difficulty; and, instead of requiring both articulations to have their full formation by the removal of the point of the tongue between them, allows the tongue to remain on the palate, *while* the middle of the tongue rises towards the *y* position. The *l* before *ū* is thus articulated by the middle instead of the point of the tongue, and a softened effect of *Y* is produced as the succeeding vowel opens from the described position. This half-formed *Y* is represented in some pronouncing dictionaries by an apostrophe:—thus, to represent the sound of the words *lure* and *lute*, the notation in Smart's excellent Dictionary, is *l'oor*, *l'oot*, etc. When the *l* and *y* are not in the same syllable—as in *value*, *volume*, etc.—both elements have their full articulation.

To perfect the mechanism of *L*, let the student adopt the various means of practice subjoined, and, whatever the nature of his mal-articulation, it will very speedily be removed.

Adjust the mouth carefully to the position for *L*,—the *tongue spread out*, elevated to the edge of the palatal arch, and lying closely against it,—the *lips drawn back* and perfectly separated at the corners, so as to permit the sound to pass out uninfluenced by the lips. Let the arrangement of the tongue against the palate in front—(by no means touching the front teeth)—and latterly against the *inside* of the teeth, be *perfectly obstructive*. Produce as clear a vocal sound as possible,—its vowel quality will be something like the French *û*—and continue it for some time with the articulating organs perfectly steady; then, by a rapid backward action of the whole tongue, modify the sound to that of the vowel *aw*. Repeat this with increasing

rapidity, till the syllables produced are shortened to *lollollolloll*, etc. In the same way, proceed with the other vowels till the formation of L with all the vowels is perfected. Then take the combinations, *lm, ln, lr, lg, lb, lv, lz, ld, ly*, and practise them with vowels before and after them,—at first prolonging the L for some seconds, to be assured of its correct formation and pure vocality, and gradually giving it the natural duration. The tongue must not leave its position for L, till the instant of formation of the succeeding element. Many persons are unable to produce L in combination with M, as in *elm, helm*, etc., without interposing a vowel. There is no difficulty in the combination when the mechanism of the sounds is clearly understood.

L is so short before the Breath Articulations, that its prolongation, as in the previous exercise, would be unnatural and a useless means of practise. Let the student form L in the following combinations, by striking the tongue instantaneously to its position,—stopping the sound at the instant of contact, but *retaining the tongue silently for some seconds* in its place, before proceeding to the next articulation,—which must be formed without any *intervention of sound or breathing*,—thus :

al p al f al th al s al sh al t al k, etc.

L *final* should be separately practised. After the *long vowels*, let it be *quickly* articulated,—*ēl, āl, ār, ūl, āwl, ōāl, ōōl*,—and after the *short vowels*, let it be a little more *prolonged*—*āl, ěl, ĭl, ŏl, ŭl*. But in every instance it must be definitely finished by the removal of the tongue from the palate.

L, like the nasal liquid N, is a very difficult letter to the Stammerer. The exercises above prescribed will be

found sufficient to perfect this articulation, when, by a preliminary course of practise, the fundamental processes of speech have been mastered. When the stammerer can govern the chest and glottis, and keep the tongue and jaw steady during the continuous flow of the vocality of *l*, he may safely proceed to these exercises ; but we must here again remark, that it will be hopeless to attempt to correct any individual fault, till the *organs* and *processes* employed by the defective element have been first brought under perfect control.

L, like N, is most difficult with the *close* lingual vowels. Such words as *little*, *lily*, *literal*, etc., are severe stumbling-blocks : the narrow scope for action which the vowel allows, the abruptness of the vowel, and the subsequent articulation requiring the same organs as the *l*, so disincline the tongue to exertion, that it remains glued to the palate ; while the glottis, uselessly outpouring breath and broken murmurs, vainly endeavours to proceed without the tongue ; till the lungs are exhausted, and the effort of *inspiration* probably disengages the fettered organ. The Stammerer must proceed cautiously in his practise, and act *on the preventive* as much as he can ; for it is a work of almost unmanageable difficulty to break the connexion between the spasmodic actions of impediment when they once get a beginning.

Repetitions of the *same Mode of action by different organs*, or of *different Modes of action by the same organs*—the latter especially—are difficult of articulation ; and form, therefore, excellent exercises. Combinations of L, R, and N, present difficulties of the latter class, which will be found under the letters R and N.

L *initial* receives no articulation in combination with it. The softened effect of *y*, heard in *lunacy*, *lute*, *lewd*,

etc. has been already noticed ; but this results rather from a modified formation of the L itself than from a combination of *l* and *y*.

L unites with the initial articulations P, B, F, S, K, G, as in *play, blame, flame, slave, class, glass*.

WORDS CONTAINING ELEMENTS OF DIFFICULTY.

Blithely, boldly, eel-like, falsely, film, foully, guiltlessly, hollowly, holily, ill-looking, jollily, ladle, lallation, latterly, lawlessly, lethal, lewdly, lilac, lily, linnet, listlessly, literature, lithic, little, lithely, lolling, lonely, lowly, loyally, lucklessly, ludicrously, lullaby, luridly, lyric, palely, palæology, philology, realm, senselessly, sillily, slowly, soliloquy, soulless, stealthily, teleology, ululate, wilily, worldly.

T.

Previous remarks (pages 37–44) will have sufficiently explained the nature of the Obstructive Formations, of which this is one. We may therefore confine our observations here to the mechanism and individual characteristics of the articulation T, referring to the above-noted pages for information regarding the general principle of obstructive articulation. In forming T, the edge of the whole tongue is laid against the front and sides of the mouth, so as perfectly to obstruct the breath. While the tongue is in this position, there must be a continued pressure of breath against it ; and wherever an aperture is made by the removal of any part of the obstructing edge, the confined breath will be emitted with a degree of explosiveness more or less strong, in proportion to the degree of its previous compression behind the tongue, and also in proportion to the abruptness with which the aperture is made.

Among the numerous defects of speech which come under the notice of one engaged in the work of correcting mal-articulations, the breath will be found to escape from the obstructive position T, through apertures of every possible variety, both of position, shape, and size. Sometimes from the very back part of the mouth, with a clattering sound, it will issue through apertures over one or both sides of the tongue; sometimes through lateral apertures at all anterior points; and correctly, through one front central aperture, by the complete disengagement of the tongue from the palate. Another mode of emitting the compressed breath from the articulative position T, is by the *nares* or nostrils,—a faulty mechanism more common than perhaps most persons are aware of. The correct articulative *action* is, we have said, the removal of the *whole tongue* from the palate. Let the student practise this action by articulating the following syllables in rapid reiteration, till he can perfectly disengage the tongue with considerable force and abruptness:—

EXERCISE.

ate, ete, ite, ote, oot: at, et, it, ot, ut.

Such must always be the mechanism of T, initial or final: but when the liquids *l* or *n* follow T *in the same word*, the lateral explosion before *l*, and the nasal emission before *n*, are not only admissible, but they are the regular and necessary modes of finishing T in such cases. Thus in *fitly*, and *fitness*, etc.; *battle*, *nettle*, *little*, etc., and *batten*, *bitten*, *button*, etc.; the point of the tongue is kept in contact with the front of the palate, in forming the *tl*; and the whole tongue is retained in its obstructive position during the utterance of the *tn*. The reason of this will be

evident after a moment's reflection on the formative actions of *l* and *n*: it will be found to be impossible to articulate T independently of these actions, with sufficient fluency for consecutive syllables of one word. The same combinations, however, in proximate words, must not be articulated thus by one action, unless in common colloquial phrases. Correct reading requires the final element of every word to be finished independently of the letter which may begin the next word. The student should therefore practise the articulations *t l* and *t n* in this separate way—till he can produce them lightly and clearly without coalescence.

EXERCISE.

ate nay at nal ate lay at lan.

T before P, K, B, G,—which otherwise completely obstruct the breath,—is liable to be reduced to the character of a mere *stop* without any audibility: and before *m*, which also occludes the mouth, it is liable to be nasally finished. To obviate these sources of indistinctness, let the following combinations be practised.

EXERCISE.

ate pa	ate ka	ate ba	ate ga	ate ma
at pat	at kat	at bat	at gat	at mat

T is a very difficult articulation to the Stammerer. It has all the heaviness arising from the downward pressure of the chest, the strong conjunctive or upward bearing of the jaw, and the muscular laxity of the mouth—the elements of impediment in the obstructive articulations generally; in addition to which it has another source of difficulty in its own articulative action. Often the percussion of the T will be distinctly heard, yet there the

Stammerer sticks fast, unable to combine the next sound with the *t*. This sort of difficulty may be caused by want of *glottal* power; but it will frequently be found to be merely articulative. Only the *point* of the tongue is disengaged—it is turned downwards so as to allow the breath to escape—but at all other points, the tongue remains in contact. The effect of throwing down the point of the tongue is to elevate the middle of it; and the *very worst position for speech* is thus assumed. Let the Stammerer practise syllables and words ending with T, and observe, by looking in a glass, or placing his finger in the angle of the neck and chin (as directed at page 181), that the whole bulk of the tongue recedes in the mouth to finish the articulation. When this *final action* is mastered, let him practise T initial; at first, if necessary, separating the T from the next element, but restraining any unnecessary waste of breath (page 38); and by degrees he will be able to unite the sounds with natural spontaneity.

A not uncommon fault of articulation is the substitution of *tl* for *cl*, and *dl* for *gl*; as in *clean*, *glean*, etc., which are thus mispronounced *tlean*, *dlean*, etc. The difference in the effect of this unwarranted combination is so slight, that it might readily escape observation, except from ears accustomed to vocal analysis. In the north and west of England this peculiarity is especially common.

T *initial* combines in English with *w*, *r*, *sh*, and *y*, as in *twine*, *true*, *chain*, *tune*. S is the only articulation with which *t* unites, as in *stay*, *stray*, etc. *Th* is a common English digraph, but it represents a simple sound, (see page 182.)

The combination *Tsh* is of very frequent occurrence, though we in no instance *write* it. It is one of the simplest possible combinations; for the T merely gives an obstruct-

ive commencement to the Sh. Tsh is the breath form of J=dzh ; and while the latter is reckoned an Alphabetic element, and represented by a single letter, the former—which is the very same articulation—is written, inconsistently enough, *Ch*.

The combination *Ts*,—which does not occur initial in English, but is common in many languages,—is another equally simple form of double articulation ; from the position T, the tongue is merely *advanced* a little, and the breath extruded hissing through the aperture of *s* ; as, for *tsh*, the tongue is slightly *retracted*, so as to send the breath through the aperture of *sh*.

The combination *Ty*, as in *tune*, is liable to be mispronounced *Tsh*, from the cause explained at page 217 ; but after a few lingual exercises have been mastered, the tongue should have acquired sufficient neatness and precision of action to contradistinguish these elements without effort or ambiguity.

WORDS CONTAINING ELEMENTS OF DIFFICULTY.

Astute, attacked, attributed, deteriorated, determinate, detriment, etiquette, iterated, potato, stickle, stopped, strategic, stutter, tactics, tantalize, tatter, taught, tautology, technics, tessellated, tetragon, tetrical, titillate, tittle-tattle, titular, totality, totter, trigger, trinity, trinket, triturate, tropical, truculent, chapter, chatter, chicken, chink, chit-chat, chipped, chitter, twopence, twitched, twitter, Teutonic, tutelary, tutor.

D.

This articulation bears the same relation to the preceding that B does to P, V to F, Z to S, etc. Its articulative position and action are the same as those of T ; but while

the tongue is in contact with the palate, the *voice* is exerted, and a muffled sound is heard, as the breath which produces the glottal vibration dilates the pharynx. Distinctness very much depends on the audibility of this sound. The student should therefore practise D and the other vocal obstructives, until he can give their vocality as much duration as it is capable of receiving (see page 165.) Our remarks on the formation of T apply equally to this element, which is liable to the same faults of articulation, defects, etc.

EXERCISE.

ade bay	ad bad	ade may	ad mad
ade gay	ad gad	ade nay	ad nad

The Stammerer must study the general mechanism of the vocal obstructives, (page 44), and acquire power over the formation of their pharyngeal murmur, before he sets to work to battle with his difficulties on this articulation. He must be able to retain the articulative *position* steadily; to perform the articulative *action* rapidly, and independently of all other positions and actions; and, lastly, to pass trippingly from one position to another, without attempts at impracticable coalescence, and without losing any one of the peculiar effects of each articulation. His cure, thus founded on power over the organs and operations of speech, will progressively advance, with rapidity, proportionate to his energy and watchfulness. Having gone through this training, the Stammerer will not only feel himself relieved from the oppressive incubus which tormented his whole "dream of life," but he may rejoice in a freer possession, and more conscious enjoyment of the crowning faculty of man, than the best of merely instinctive speakers who never felt the sore deprivation, and who know not the

value to their social happiness of that power of speech which they ignorantly exercise.

D initial, like T, unites with W, R, and Y; and with the *vocal* form of Sh—as in *dwarf*, *drew*, *due*, and *Jew*. It combines with no initial articulation: we write Bd in *bdellium*, but the B is silent. *Dy* (as in *duke*,) is apt to be confounded with *Dzh*=J, as *Ty* is slurred into *Tsh*, by careless tongues.

The combination *Dzh*=J is one of the simplest forms of double articulation;—in this respect analogous to the French *Bw* and *Pw*, and the German *Ts* or *Dz*. The same articulating agents are used for both elements of the combinations: the *continuous* elements being merely commenced explosively by the momentary oral occlusion. This obvious simplicity of the combination *dzh* is, doubtless, the reason why these sounds are denoted by a single character in our alphabet.

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

awed	darn	dint	duck	droll	need
ought	tarn	tint	tuck	troll	neat
badge	dead	dire	dusk	droop	rider
batch	debt	tire	tusk	troop	writer
bed	deal	dome	Dutch	drought	sad
bet	teal	tome	touch	trout	sat
cold	dear	door	drain	drunk	tied
colt	tear	tore	train	trunk	tight
dangle	dies	dowdy	drench	faded	Tudor
tangle	ties	doughty	trench	fated	tutor
dank	dine	down	drew	ladder	udder
tank	tine	town	true	latter	utter
dale	dingle	duel	drip	loud	
tale	tingle	tewel	trip	lout	

WORDS CONTAINING ELEMENTS OF DIFFICULTY.

Avidity, additament, deadlight, debited, debt, dedicate, deducted, ditch, ditto, dividend, docketed, dodecagon, dotted, doth, drastic, dreaded, drip, drudge, Druid, due, dulia, duty, dwelt, dwindle, edited, educate, eradicated, gibbeted, gladiator, hereditary, jejune, jilted, jotted, laudatory, meditated, nudity, oddity, quidditative, rhododendron, sedative.

N.

The difference between this articulation and the preceding (D) is precisely the same as that between B and M, explained at page 167. While the organs are placed in the orally obstructive position, the soft palate uncovers the end of the nasal passages, and the current of voice flows continuously through the nose. If these passages are not immediately opened, or if the breath is altogether intercepted for an instant, the effect of *dn*, as in *midnight*, will be produced. D and N having the same lingual action, the tongue would require to make two strokes on the palate in order to articulate these letters separately; but when *d* or *t* comes before *n* in the same word, such separate articulation would create a hiatus incompatible with the closeness of syllabic connexion;—D and T, therefore, before N in the same word, merely give an obstructive commencement to the N, while the tongue remains motionless. Many persons habitually form the nasals M and N with this initial percussive; and the converse fault, namely, that of commencing the Obstructive elements *nasally*, is equally, if not more common. The three nasals are also very often faultily *finished explosively*, from a momentary covering of the nares before the articulating organs are separated. The peculiar liability of NG

to be thus terminated by G has been already noticed. (See page 46.) The voice, in forming N, must be pure and unmixed with aspiration. The least contraction of the nostrils, or their partial obstruction from any cause, will create sniffing. If the nostrils are pinched while forming N, the explosive effect of D with a nasal resonance will be produced. This is the sort of sound caused by "cold in the head,"—when the vocalized breath entering the nostrils, but meeting with impediments to its egress, collects in the pharynx, and the removal of the tongue from the palate is attended by a degree of the percussiveness of D. If the nostrils are altogether clogged up, it will be impossible to avoid this ambiguous effect, but a pure formation of *voice*, and an effort of expansion in the nasal passages, will, in a great measure, obviate the sniffing which so commonly results from this troublesome cause.

In some cases, the nasal elements have the quality of these *cold-impered* sounds, only from habit,—probably growing out of frequent liability to colds. This peculiarity impresses the utterance very strongly; it is altogether incompatible with effective speaking. Except where the fault arises from structural affections, polypus, etc., it may be entirely removed by careful exercise of the imperfect elements.

N is almost invariably a source of great difficulty to the *Stammerer*. He will generally have perfected the *explosives*, and nearly all the other articulations, before he can master this letter, and perhaps L. The impediment on N may be of a fourfold nature; combining the difficulties which arise from mismanagement of the chest and organs of respiration,—of the glottis and sonorous agents,—of the tongue and articulative organs,—and of the lower jaw. Without further indicating the nature of the difficulties this element

may present, we may at once prescribe a means of practice for the acquirement of the true formation, independently of all previously existing faults. Let the Stammerer exercise himself with persevering energy in the way recommended; above all, endeavouring to understand the principles on which he is working, and he will not be long in attaining command over all the processes at fault in his impeded utterance of N.

Let him, with a mirror before him, open his mouth as widely as he can, and retain it at its greatest opening, while he places the tongue on the palate, as for D. Here let it rest steadily for some time :—it is in the position for either T, D, or N. Let him now produce a continuous sound, without the slightest motion in any visible part of the mouth. This sound—if the tongue has been obstructively placed on the palate—must necessarily pass through the nose. While the organs remain in the position assumed, this sound is a nasal *vowel*; it is as clearly a vowel as *e*, *o*, or any of the recognized oral qualities of vowel sound. The Stammerer will by this exercise at once effectively counteract the disturbing tendencies of the tongue and the jaw; and by strengthening and purifying the voice, he will gain glottal power; while, by giving the well formed sound as long continuance as possible, with the chest elevated, he will check the heavy pressure on the lungs, and acquire ease, steadiness, and power of expiration.

Still keeping the tongue on the palate, the voice may be exercised in the production of short and quickly uttered jets of N-sound—as well as of the continuous stream—but, throughout with the tongue, lips, and teeth perfectly motionless.

These exercises will perfect the articulative *position* of N. Let the Stammerer, when these have been sufficiently practised, add to them the *action* which completes the articulation,—by rapidly *removing the tongue* from all points of upward contact. If the current of voice be continued, the removal of the tongue will admit the breath into the mouth, and some vowel will be produced. Those vowels which are formed with the tongue drawn *backwards*, present less difficulty with N and the other lingua-palatal articulations, than the vowels which require the approximation of the tongue to the roof of the mouth,—on account of the greater scope which they afford to the articulative action. Thus *no*, (g)*naw*, etc., are much more easily uttered than (k)*nee*, (k)*nit*, *nay*, etc. Let the Stammerer, therefore, in adding the vowels to N, *begin* with the least difficult,—reiterating each syllable frequently without any break in the continuous flow of glottal sound.

At this stage he must carefully watch that no unnecessary action—especially *of the jaw*—accompany that of the tongue. The teeth should remain as steady as if the jaw were hingeless, till the tongue can perform its office *independently*, and with satisfactory rapidity and energy. This exercise should be followed up by reading words with N initial; and then by practising combinations in which N occurs, or any exercises containing a difficulty.

N, like the other liquids, (see page 169) presents several marked varieties of quantity. It is extremely short when followed by a breath articulation, as in *paint*—longer when before a vocal articulation, as in *pained*—and longest when final or before another liquid, as in *pain* and *painless*.

N initial combines only with Y, as in *new*. N unites with no initial articulation but S, as in *snow*. It occurs, however, before nearly all articulations in separate

syllables; as in *rainbow*, *enjoy*, *endure*, *unfold*, *ingratitude*, *enhance*, *inquire*, *enclose*, *unkennel*, *inlet*, *inmost*, *unknown*, *unpardoned*, *inroad*, *insult*, *intact*, *invalid*, *unwise*, *inure*, *frenzy*, *enshrine*, *panther*, *meanwhile*. *N* is found also in the following final combinations:—with *d* as in *bend*, *dzh* as in *hinge*, *s* as in *hence*, *t* as in *bent*, *z* as in *lens*, *tsh* as in *bench*, *th* as in *plinth*.

The nasal articulations are very liable to be exchanged in some combinations, so as organically to correspond to the articulations with which they stand connected. Thus *n* before a labial articulation in the same syllable, will be changed to *m*; and before *k* or *g*, into *ng*—as in *Banff*, pronounced *Bamff*; *ink*, *bank*, etc., pronounced *ingk*, *bangk*, etc. A similar tendency is manifested in the vulgar pronunciation of such words as *length* and *strength*, where the *ng* before the lingua-dental articulation *th* is changed into *n*. This, however, is to be avoided—because not sanctioned by the best usage. The pronunciations *lenth* and *strenth* are very generally heard in Scotland.

Combinations of *N* and *L* present an articulative difficulty; in overcoming which, considerable lingual power cannot fail to be acquired. The following arrangements should be practised with rapid iteration.

EXERCISE.

na la la na na la na la na la na la na la na na la

nin lil	nin lil nin	nillin-rinnil
lil nin	lil nin lil	rinnil-nirril
lin rin	lin rin lin	rillin-linnil
nil ril	nil ril nil	lirrin-rillin

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

chine	gleaned	lane	nap	nutatation	son
chime	gleamed	lame	map	mutation	some

cunning	gnaw	money	narrow	prison	tense
coming	maw	mummy	marrow	prism	temse
feigned	guns	nail	newt	run	tent
famed	gums	mail	mute	rum	tempt
fern	kneel	name	nunnery	scene	time
firm	meal	maim	mummery	seen	time

WORDS CONTAINING ELEMENTS OF DIFFICULTY.

Anemone, anent, annual, anonymous, anthelminthic, cognomen, conundrum, enemy, enmity, inanimate, inanity, knitting, linen, Memnon, Memnonian, monad, mnemonics, ninny, nomad, nonage, nonentity, numerate, unanimous, unenamoured, unentertaining, unenumerated, uninitiated, uninured.

Sh.

This element is heard when the point of the tongue, from its forward position at S, is drawn inwards, so as slightly to *enlarge* the aperture through which the breath hisses. The shape, too, of the passage, is altered by the *middle of the tongue rising* within the arch of the palate. The general appearance of the tongue is more thick and bulky than for S. This cannot be observed during the articulation of the elements, for the teeth are not sufficiently apart, but if the mouth be opened after *S* and *Sh*, without moving the tongue from the articulative positions, the difference in the elevation and apparent bulk of the tongue will be evident. The observation in this way of the position of the tongue is of much use in facilitating the correction of faults in articulation. We have said that the point of the tongue is drawn inwards from its position at S—but the kind of sound heard in *Sh* may be produced with the point of the tongue merely *depressed*, or even advanced to the lower teeth. The breath is then

modified by the approximation of the middle of the tongue to the rim of the palatal arch; but this formation is a faulty one, because it does not easily combine with other lingual articulations. The tongue cannot pass with facility from one to another of its positions, unless it is kept free from contact with the bed of the jaw. Let the student place the tongue in the position for *S*, and then, while the current of breath flows uninterruptedly, let him gradually draw back the tongue—keeping the point at a uniform elevation—and he will modify the hiss into *Sh*. Let him practise this action till he can pass from *S* to *Sh*, thence to *S*, back again to *Sh*, and so on alternately, repeatedly during one expiration.

The formation of *Sh* is very generally faulty from an accompanying projection of the lips. The action of the tongue is not sufficiently firm and decided to give a distinctive character to the hiss, and the clumsy expedient of funnelling the lips is resorted to. The exercise on *S* and *Sh* above prescribed will manifest both the existence and the dispensability of this labial action.

The sound of this element is generally represented by *sh*, when it is initial or final, but the sound is often heard in other positions where it has no appropriate orthography, as in *Asia*, *social*, *conscious*, *tension*, *mention*, etc. Wherever the articulations *s* and *y* come together, as in words beginning with *s*, followed by alphabetic *u*, there is a natural tendency in the organs to strike *sh* instead of *sy*. *S* is produced with the tongue comparatively flat and pointed; *Y* is formed with the middle of the tongue raised in close approximation to the roof of the palatal arch: and the position of *sh* being exactly intermediate,—the tongue somewhat retracted, and its bulk somewhat elevated,—we see in the mechanism of the elements the reason

why *sh* will very naturally take the place of *sy* in rapid utterance. This tendency is yielded to in some instances, but opposed by correct usage in others. In *sure*, *assure*, *insure*, *fissure*, *tissue*, etc., universal custom has authorized the exchange of *sy* for *sh*, but in *suit*, *sue*, *superior*, etc., the best usage imperatively forbids it, as a corruption. In all words containing this combination, we see the natural tendency strongly illustrated in the pronunciation of the uneducated.

A tailor was threat'ning a debtor to *shoe* (sue),
Says he, needy witling, "Kind sir, at your pleasure;—
But I'll thank you as much, and 'twere easier for you
Just to *shoot* (suit) me,—and now I can stand for my measure."

The pronunciation of the word *sewer* (a drain) illustrates the working of the same principle, and also of one noticed at page 146, with reference to the vowel *oo* before *r*(8). The necessities of fluent speaking have demanded the curtailment of this word as one not worthy of the more emphatic and deliberate pronunciation of the double articulations; and the identity of its sound, so shortened, with another word (*sure*), has rendered a *vowel*-change necessary to contradistinguish the words. This has been done by the substitution of *o*(11) for *oo*; and the current pronunciation of the word (*shore*) is thus very naturally obtained.

The tendency of anterior lingual articulations to take *sh* rather than the more difficult *y* into combination with them, is further manifested in words containing *y* after *t*, as in *tune*, *tutor*, etc., where vulgar pronunciation converts the *y* into *sh*. In unaccented syllables, this change is made by more than the vulgar, as in *nature*, *feature*, etc., which are too often colloquially pronounced *na-tshoor*, *fea-tshoor*, etc.; but careful speakers should articulate *ty* in all such cases.

In the common terminations *sion*, *tion*, *cial*, *tial*, *cious*, etc., pronounced *shun*, *shal*, *shus*, etc., English usage has fixed the sound of the *si*, *ci*, *ti*, to *sh*. In French these terminations are dissyllabic—pronounced *se-on*, etc.

In some words, in which *se* or *sy* have become slurred into *sh*, the ear does not seem satisfied to lose all trace of the elided sound, and a soft effect of *y* is heard, as in *specie*, *tertian*, etc. But *shy* is a very unfluent combination, and never occurs in one syllable.

The student will find the repetition of the hissing articulations, *th*, *s*, and *sh*, a very useful exercise. Thus : begin with *th*, and change that by a rapid motion of the tip of the tongue to *s* ; then, by a farther retraction equally rapid, produce *sh* ; then back to *s* and *th*, and thence again to *s* and *sh*, without any intervening vowel sound ; thus,—

th-s-sh-s-th-s-sh-s-th-s-sh-s-th, etc.

Syllables with these elements alternately initial, form an excellent lingual exercise. They present comparatively little difficulty when arranged in the order of their formation ; *th*, *s*, *sh* ; or *sh*, *s*, *th* ; but when the anterior and posterior formations come together, as in the following arrangements, they present a stumbling-block, which probably the best articulator will not get over without practice. Verbal *accentuation* should be given to the syllables.

EXERCISE.

tha sha sa	sha tha sa	sa sha tha	sa tha sha
tha sha sa sha tha sa		sa sha tha sa tha sha	

To the Stammerer who has sufficiently mastered the fundamental principles on which his cure must be based, these perplexing combinations will be of much service, in developing power and precision of lingual action.

Sh *initial* combines only with R in English, as in *shrew*, *shrine*, etc. The combination is harsh, and somewhat difficult ; and it tends to make speakers employ the lips to assist in effecting it more easily. Labial interference is, however, ungraceful, and should be dispensed with.

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

ashes	batch	beech	each	hatch	itch	lash	leash
asses	bats	beats	eats	hats	its	lass	lease
mesh	porch	push	Scotch	witch	shame	shake	shave
mess	ports	puss	Scots	wits	same	sake	save
shed	sheet	sheen	sheer	shelf	shell	ship	shift
said	seat	scene	sear	self	sell	sip	sift
shin	shine	shingle	shoal	shock	shod	shop	short
sin	sign	single	soul	sock	sod	sop	sort

WORDS CONTAINING ELEMENTS OF DIFFICULTY.

Asia, Grecian, Persia, Russian, ascii, antiscii, association, chaises, facetious, justiciary, precocious, possessions, sashes, satiate, special, specië, species, specious, suspicious, shrewd, shrift, shrink.

Zh.

This articulation, which is not uncommon in English,—arising out of the necessities of fluent utterance, instead of *zy*—has no appropriate symbol in our orthography. It is the regular sound of the letter *J* in French. Before alphabetic *u*(=*yoo*), we have this sound represented by *s*, as in *measure*, and by *z*, as in *seizure*, etc. It legitimately occurs also in *lesion*, *vision*, etc. ; and in *transition*, where the regular sound of *ti*, viz., *sh*, is vocalized, to avoid the less euphonious combination of two hissing elements. Careless speakers pronounce *zh* instead of *y* in *educate*, *credulous*, etc., and often even in accented syllables, as

duke, duel, etc. This will be carefully avoided by all who desire to speak well.

In its formation, this element is precisely the same as the preceding (sh) with the addition of glottal sound. In this simple state, *Zh* occurs initial in no English word; but is invariably commenced from the obstructive position *D*. The combination thus produced, namely, *Dzh*, is represented by *J* or *G*, as in *James, George*, etc.

Zh final, also, is never unaccompanied by *d*, except in naturalized French words,—such as *rouge*. Its English use is exemplified in *judge, cage*, etc. In the former word, the letter *d* is redundant, since *g* alone, as in *cage*, represents the combination *dzh*. The writing of this redundant *d* is one of our orthographical expedients to denote that the preceding vowel is to have its “stopped” or “short” sound,—and the writing of a final *e* is another expedient to show that the *g* is to have its “soft,” or double sound, and not its “hard,” or single sound. How much more easy and natural would it be,—how much perplexity would it save foreigners,—and how many weary tasks and useless punishments would it ward from unhappy learners, if we could only be brought to submit our orthography to rational correction? Here, for instance, is a division of this work on a sound which our acknowledged literal symbols furnish us with no mark to designate;—which is only recognized among the elements of our language as one constituent of a *double alphabetic sound*,—apparently deemed indivisible, because represented by a single letter; and yet we are compelled to use a *digraph* to represent the *half* of this alphabetic *monograph*, or we could not show its relation to the breath-articulation of the same formation,—Sh.

WORDS CONTAINING THE SOUND OF Zh BETWEEN VOWELS.

Abrasion, invasion, occasion, adhesion, lesion, derision, incision, transition, vision, corrosion, contusion, delusion, diffusion, illusion, intrusion; azure, leisure, seizure, measure, pleasure, treasure; casual, visual, usual, usurer.

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

(dzh)	age	barge	budge	hedge	ledge	liege	siege
(dz)	aids	bards	buds	heads	leads	Leeds	seeds
(dzh)	badge	besiege	edge	large	liege	ridge	serge
(tsh)	batch	besech	etch	larch	leech	rich	search
gin	jaunt	jean	jeer	jest	Jew	Jews	joke
chin	chant	chain	cheer	chest	chew	choose	choke

Yh.

In forming this element, the back of the tongue is rounded upwards to a close position against the palate at a point intermediate to the formations *sh* and *ch* (German.) If the effort be made to compound these elements by *sounding both together*, the effect of a whispered Y will be produced.

This element—the breath form of Y—occurs in English only in connection with the vocal Y—the first element of alphabetic *ū*(=yoo). It is represented by H, as in *hew*, *hue*, *human*, etc.

The German and Scotch *ch* have the effect of this whispered *y* when they occur in connexion with close lingual vowels, as in *ich*, (the pronoun *I* in German) and *fich*! (a Scotch interjection of disgust.)

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

Hew=hue=Hugh

Ewe=yew=you

Y.

This element bears the same relation to the preceding that V does to F, Z to S, etc.: the organic position modifies vocalized instead of whispered breath. The tongue in forming Y is almost in the position for the vowel *ee*; just as in forming W the lips modify the voice almost to the quality of the vowel *oo*. The formative apertures are simply more close, so that Y and W are *articulated forms* of the close vowel-sounds *ee* and *oo*.

A very common fault among careless speakers is to aspirate *y* in connexion with breath articulations, and often to convert it into the proximate form *sh*. Thus, *tune* is pronounced *tshoon*; — *beauteous*, *beautshus*; *righteous*, *rightshus*, etc. This should be avoided,—it is mere slovenliness.

The 1st Vowel (*ee*) unaccented, before a vowel, is in many words warrantably shortened into *y* as in *filial*, *saviour*, *glazier*, etc. After the sound of Sh or Zh, the *y* is often entirely sunk, as in *social*, *vision*, etc.

Y before the 1st vowel presents an articulative difficulty. Many persons, especially in Scotland, entirely omit the Y in that situation: thus we hear of “an old man bending under the weight of *ears*,” instead of “*years*.” A little practice will enable any one to master this combination without such asinine alterations.

The letter Y when final, is always a *vowel*; it has the sound of the 2nd vowel in such words as *many*, *very*, etc., and of the diphthong 7-1 in *by*, *try*, etc. The Articulation Y is never heard final in English; it occurs, however, in French, as in *fille*, etc., pronounced *fee-y(e)*, etc.

Y initial combines with no articulation. The initial elements P, B, M, F, V, T, D, N, Th, (Breath) S, Z, K,

G, take Y into combination, but only before the close labial vowel *oo*; as in *pure, beauty, mew, feu, view, tune, due, new, thurible, sue, zeugma, cupola, gewgaw*. L, we have noticed, takes Y imperfectly into combination, as in *lure, lute*, etc. (See page 200.)

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

ye'll	ye'an	year	yeast	ye've	use	beauty	Bute
eel	e'en	ear	east	eve	ooze	booty	boot
'cute	dure	due	feud	mewed	mute	pew	pule
coot	doer	do	food	mood	moot	pooh!	pool
pure							
poor							

K.

This articulation is formed by the *silent contact* and *audible separation* of the back of the tongue and the posterior part of the palate. The precise points of contact vary before the different vowels. Before the close lingual vowel *ee*, the position of the tongue is much farther forward than before *ah* or *aw*. The tongue *could* articulate K from one uniform position, before all the vowels, but there is a natural tendency to accommodate facility of utterance by these little changes, which would require an effort to avoid. The vowel *ee* (No. 1) requires the middle of the tongue to be pressed very close to the palate, and the syllables *ke* or *eke* are articulated with the least possible action of the organ, by merely closing the *ee* aperture before or after the vowel. The effect of the "broad" and "close" formations of *k* (as we have seen them discriminated in a Gaelic grammar, but never in an English one) differs only in the vowel quality of the breathing emitted on the separation of the organs. But an English peculiarity of elegant speech depends entirely on this trivial circumstance. The posterior "broad"

formation which would naturally come before the open vowel *ah*(7), is exchanged for the anterior "close" formation in such words as *card*, *kind*, etc. There is an extremely graceful effect in this euphonism, which is but clumsily imitated by those who interpose an *e* or a *y* between the *k* and the open vowel.

In Smart's Pronouncing Dictionary, the student is carefully guarded against the affectation of sounding *y* in these cases, but, from the notation adopted, he will still be apt to overdo the euphonic effect; for it is ranked as a separate element, represented by an apostrophe—thus, *c'ard*, *k'ind*, etc. We have described the organic cause of the peculiarity. It occurs only before the open vowels 7 and 7.1, and not in all words containing the combinations.

An American singularity consists in giving the anterior formation to K before 7.13 also, as in *cow*, etc.

In any case of indistinct or impeded utterance, the position of the *point of the tongue* in the articulation of K must be observed. The tongue is often thrust down into the bed of the lower jaw, or against the lower teeth, but this is fatal to fluency and clearness, and it is also offensive to the eye. The fore-part of the tongue should always be kept as nearly horizontal as possible. It may even be folded backwards for the posterior K, but it can never be suffered to *descend* without a sacrifice of neatness, which a speaker of taste would not willingly make.

To the Stammerer this observation of the position of the tongue is particularly necessary. He generally forms K by forcing up the *middle of the tongue* against the *top of the palatal arch*, while the *point of the tongue* aids the effort to hold it there by *pressing down* against the lower teeth or gums. The jaw, too, bears upwards with force upon the tongue, which, in the paroxysm of impediment, the

Stammerer is utterly unable to move. Sometimes the fixture of the tongue is less complete, and in its efforts to leave the palate, the antagonist forces throw the whole mouth and features into convulsive distortion. The Stammerer must practise this articulation with his mouth *widely opened and motionless*, so that the tongue may be free to strike and leave the palate *unaffected by motions of the jaw*. Let the tongue be well exercised in the simple action of *k*, in combination, at first, with the open vowels *ah* and *aw*, until it can give off the syllables with rapidity, and entirely by its own action. Thus :

kah kah kah ; caw caw caw ; akakak ; ockockock, etc.

The syllables may be arranged in word-clusters—dissyllabic, trissyllabic, etc., with varying accents. Thus :

ickik, eckék, ákakak, okókok, ukukúk, etc.

After this exercise, the Stammerer should be able to master words with *k initial*. Let him remember—if he find them difficult, that the *k* is merely a *position* from which to commence the succeeding vowel ; that the *initial* letter may practically be considered as done, whenever the organs meet ; for that then he has only to separate the organs in order to emit the vowel. If he attempt to make anything more of the consonant by pressure, he must inevitably fail.

The following arrangement of the three breath obstructive formations, P, T, K, should be practised.

EXERCISE.

katapa	kapata	pakata	pataka	tapaka	takapa ;
	pip tit		pip kik		tit kik
	pit kit		tip kip		pik tik
	pip tit pip		tit pip tit		pip kik pip
	pit kit pik		tip kip tik		kit pit kip

Not only the Stammerer, but all speakers, especially those whose enunciations are indistinct, should cultivate this sort of oral gymnastics, as one of the most powerful means of improving the articulation.

A common ungainliness of speech, and a frequent aggravation of a Stammerer's difficulty, arises, in words beginning with *qu* (= *kw*) from anticipating the *w*, by projecting the lips while the tongue remains in the attitude of *K*. The mouth can do only *one thing at a time*.

K initial combines with *w*, *r*, *l*, and *y*, as in *quick*, *crime*, *climb*, *cure*. *K* unites with *initial S*, as in *scheme*, *scream*, etc., and with no other articulation.

WORDS CONTAINING ELEMENTS OF DIFFICULTY.

Act, cachectic, cachexy, cackle, cacophony, calculate, calx, cantankerous, capital, carcanet, carking, cassock, catachresis, catapult, catechism, catechetics, categorical, characteristic, clanking, click-clack, climacteric, climax, cockatoo, cockatrice, cockpit, cocoa, colloquial, concatenate, conch, concuss, conqueror, contact, contradict, contrary, cracked, crepitate, cricket, critic, crocodile, cucumber, cuticle, kick, kipper, kitten, nictitate, picnic, quack, quickset, quincunx, scatter, sceptic, sect, shocked, strict, vectitation.

G.

This element is the sound of the letter *G* before *a*, *o*, and *u*. It is commonly called the "hard" *G*, to distinguish it from the "soft" *G* (= *j*, = *dzh*) sometimes heard before the vowels *e* and *i*, as in *gentle*, *ginger*, etc.

The formation of the "hard" *G* is precisely the same as that of the preceding letter (*K*) but with the addition of an effort of *voice* during the contact of the articulating

organs. It thus differs from K as B does from P, D from T, etc. Our remarks on the position of the tongue, etc., in forming K, will therefore equally apply to this letter.

G, before the open vowels 7 and 8, and the diphthong 7.1, takes, in some words, the same anterior formation as K in such combinations, producing a soft transitional effect resembling the articulation Y, as in *girl*, *guard*, *guide*, etc.

A very common fault in the formation of G initial, consists in a degree of nasality, which, for want of sufficient energy of articulation, precedes and weakens the percussiveness of the letter,—*good* being pronounced *ng-good*, etc. The fault is precisely analogous to the less common one of sounding *m* before *b*, or *n* before *d*, as *m-but* for *but*; *n-don't* for *don't*.

The vocal sound of G is very often feeble, or altogether wanting. It is not capable of much prolongation, but the student should have the power of clearly producing this shut vocality as a means of expressiveness. He should practise combinations of the three vocal obstructives, B, D, G, giving to the articulations all the vocal sound he can, but carefully guarding against a nasal tone. In B, D, or G, the voice can only be continued while the breath passes into the *pharynx*; when this cavity is fully distended, the sound must cease, and on separating the organs, an explosive emission of the compressed breath will take place. If the sound is *easily* continued beyond a couple of seconds, the voice may be suspected to be passing into the nostrils.

EXERCISE.

ga ba da
ga da ba

ba da ga
ba ga da

da ba ga
da ga ba

G, like K, is subject to the error of lateral explosiveness before L;—*glove*, *globe*, etc., being pronounced *dlove*,

dlobe, etc. There is no organic necessity to plead for this defect. The cure consists in rousing up the tongue to activity.

G *initial* combines with *l*, *r*, *w*, and *y*, as in *glad*, *great*, *Guelph*, *gules*, etc.; but very rarely with the last two in English. G enters into combination with no initial articulation.

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

gable	gaiter	game	gape	garter	gauge	glass
cable	cater	came	cape	carter	cage	class
glean	glue	graft	grape	grain	grave	grease
clean	clue	craft	crape	crane	crave	crease
great	grew	grime	ground	group	grow	gruel
crate	crew	crime	crowned	croup	crow	cruel
grumble	bag	dug	frog	lag	lug	nag
crumble	back	duck	frock	lack	luck	knack
peg	pig	plug	rag	stag	tag	tug
peck	pick	pluck	rack	stack	tack	tuck

WORDS CONTAINING ELEMENTS OF DIFFICULTY.

Aggregate, agog, cog, cognisant, gagged, galaxy, gargarize, gargle, gastric, gherkin, gibber, gig, giggle, gittern, globule, glutton, goggle, gregal, grogram, gullet, gurgle, gutter, guaranty, logogram, logography, recognize, segregate.

NG.

This is the nasal form of the preceding element; the organic formation by the tongue and palate is precisely that of G; but the *velum*, or soft palate, is removed from the nares, and the pharynx being thus rendered incapable of retaining the breath, the voice passes freely out of the nostrils.

Ng is never used as an *initial* articulation in English; but it does occur as such in some languages. Among individual *cacophonous* peculiarities, *ng* is sometimes heard

instead of *L*. This is generally accompanied by *burring*. The tongue, either from bad habit, or from inability to leave the lower jaw, lies in the bed of the mouth, and forms the linguo-palatal articulations by the *middle* of the tongue striking against the roof of the mouth. This makes the position for *l* nearly, or altogether *obstructive*, and the effort to give continuous voice to the letter, of course sends the vocal stream through the nose.

“Soft^{ng}y and sweet, in ^{ng}iquid ^{ng}ays,
The heav^{ng}y hang^{ng}ujahs raise!”

In most cases, this, like nine-tenths of all varieties of defective articulation, is perfectly curable: and even where structural malformation exists, Art can do much to lessen or cover the peculiarity.

It is a general principle of articulation, that the organs employed in forming any element *must be separated in order to complete it*. We have explained at page 47, the reason that in thus finishing *ng*, there is a tendency, greater than in the case of the other nasal sounds, to give a degree of compression and consequent explosiveness to the breath—producing the double articulation *ng-g*, or *ng-k*. Many persons find it difficult to finish *ng* by separation of the organs without producing some effect of *G* or *K*, and they consequently form the articulation imperfectly by simply stopping the sound in the glottis. When, however, the *ng* final is followed by a word beginning with a vowel, the organs *must* come apart; and with the vowel—out comes the *G*.

The best way to get rid of this habit is to practise *ng* as an *initial* before vowels. This will have the effect of at once manifesting the existence and the nature of the defect; and the power to give the soft terminal action will very soon be acquired.

EXERCISE.

nga, nge, ngi, ngo, ngoo.

Exception has been taken by some critics to the English mode of *writing* this element by *ng*, because the sound contains neither an *n* nor a *g*. That the Alphabet does not supply a character to represent this simple elementary sound, is undoubtedly a fault; but until we have a distinctive character, we could not wish a better digraph than *ng*—which, very appropriately symbolizes a *nasal G*.

N before *g* or *k*, unless in unaccented prefixes (as in *enquire*, *engross*, *include*, *ungodly*, *unkind*, etc.) generally takes the sound of *ng*, as in *single*, *uncle*, *vanquish*, etc., pronounced *sing-gle*, *ung-cle*, etc. A similar exchange of *n* for *m* before labial articulations has been noticed at page 214. The digraph *ng* has its simple elementary sound in *sing-er*, *hang-er*, etc.; but it has the sound of *ng-g* in such words as *En-gland*, *fin-ger*, *lon-ger*, *youn-ger*, etc. The omission of the *g* in these words is a Scotticism.

WORDS TO BE DISTINGUISHED IN PRONUNCIATION.

clang	fang	pang	rang	dinging
clan	fan	pan	ran	dinning
king	singing	thing	gong	bung
kin	sinning	thin	gone	bun
stung	tongue	rung	long-er (n.)	long-est (v.)
stun	tun	run	lon-ger (adj.)	lon-gest (adj.)

WORDS CONTAINING ELEMENTS OF DIFFICULTY.

Banging, bringing, clanging, clinging, flinging, hanging, longing, singing, winging, wronging; anxious, compunction, concord, crank, function, unctuous; length, lengthen, strength, strengthen.

[END OF PART SECOND.]

VOCAL PHYSIOLOGY

Part Third

CURE OF STAMMERING AND OTHER IMPEDIMENTS OF SPEECH

Part Third.

CURE OF STAMMERING, AND OTHER IMPEDIMENTS OF SPEECH.

ARTICULATIVE EXERCISES, ETC.

UNDER the head of Impediments are usually included all defects of Articulation, Lispings, Burring, and other Alphabetic Mispronunciations, as well as Stuttering, Hesitation, and Spasmodic Stammering. But the last three alone come within the meaning of an *Impediment*; and to them, we shall confine our remarks on Impeded Utterance. Sufficient directions for the removal of all minor blemishes of articulation will be found under the different letters in the preceding part of this work.

One general direction, however, we may here give with reference to all forms of inarticulation or of mal-articulation. In practising for their correction, pronounce *one sound at a time*:—facility of combination will come with practice. First study the mechanism of the element which is defective, and practise it singly until its formation becomes easy and distinct. Then separately prefix and subjoin other sounds, and gradually increase rapidity of sequence until the effect of ordinary combination is produced. Fluency and perfect accuracy will, in this way, in a short time be attained.

Those defects are properly impediments, which prevent the organs from passing smoothly from one to any other vocal position. Thus when the organs articulate so loosely that they no sooner touch than they rebound ; and when syllables are iterated again and again, before the next sound can be formed, there is an impediment—of a comparatively simple kind, which is distinguished by the name of *Stuttering*. When there is a silent choking effort, accompanied perhaps by an ineffectual opening and shutting of the mouth ; or when only short, fragmentary particles of sound escape, during the open-mouthed effort to speak, there is clearly an *impediment*,—of a more serious nature,—*Spasmodic Hesitation*. And when, at the recurrence of any habitually difficult word or letter, or under the apprehension of any difficulty, a series of muscular actions is evoked, such as have no connection with the natural effort of speech,—there is the most aggravated form of impediment,—*Convulsive Stammering*.

Stuttering and Hesitation are stages through which the Stammerer generally passes before he reaches the climax of difficulty ; and if he were brought under treatment, before the spasmodic habit became established, his cure would be much more easy than after the malady has become rooted in his muscular and nervous system. But often the transition from simple to more complicated forms of difficulty is so rapid, that it cannot be traced or anticipated. Perhaps some slight ailment may imperceptibly introduce the higher impediment, or some evil example may draw the ill-mastered utterance at once into the vortex of difficulty. Indeed, in by far the majority of cases of Stammering, the impediment can apparently be traced back to *imitation*, from which it either had taken rise, or under the influence of which it had become

formidable, from a state perhaps of mere indistinctness or careless Stuttering, which had predisposed to the affection.

The characteristics of these three kinds of impediment are broadly drawn : few cases present just these and no other features ; in all there is something idiocratic, so that hardly any two cases are precisely alike.

A case of simple *Stuttering* would need little more for its removal than the cultivation of a firm articulation and clearly sonorous voice. A case of simple *Hesitation* would require little more than a course of exercises for the management of respiration, to increase the receptive and retentive powers of the lungs ; and a knowledge of the various oral actions which modify the sounds of speech, in order to exchange difficulty for smoothness and fluency. Spasmodic *Stammering* generally combines with its own peculiar contortive efforts, the incontinent hurry of *stuttering*, and the gasping breath-catches, and silent straining of *hesitation*.

But in many cases of Stuttering—that is, where stuttering or loose hurried repetitions are the leading features of the impediment,—there is a complication of difficulties :—some degree of hesitation, and occasional spasmodic twitchings, will indicate the progression of the impediment to its painful climax ; and exercises of a more complex nature must be adopted to eradicate the germs of Stammering.

Hesitation is seldom found without more active manifestations of difficulty : effort misdirected gives rise to distortions of the mouth, lateral motion of the jaw, protrusion of the tongue, straining of the eyes, winking, rolling of the head, etc. Very often, indeed, an impediment characterized mainly by hesitation and silent effort, is accompanied by a species of action more difficult to be subdued than the most demonstrative and violent, that

agitates the whole body in convulsive stammering. The less impetuous actions are not so easily made subjects of observation and correction; and the pupil is often of a comparatively heavy and sluggish temperament,—too inert to bestow watchfulness, to discover and check beginnings of difficulty: so that a case of apparently slight impediment is frequently more tedious and difficult to cure than one of the most boisterous and convulsive aspect.

Nervousness is, in a greater or less degree, an aggravant of difficulty in all cases of Impediment. It is a common professional dogma, and a still more common popular delusion, that nervousness is the cause of Stammering; but it would be more correct to say, that Stammering is the cause of nervousness. Constitutionally nervous persons are undoubtedly more liable than others to be affected by difficulties of utterance; but there is an incomparably greater number of “nervous” persons than of Stammerers, and were stammering the result of nervousness, the larger proportion would certainly be found among those affected by Impediment. Any peculiarity—either of conformation or of habitual manner—is a cause of nervousness, when the idiocracy is made a subject of observation. An amateur called upon to play or sing for the first time before critics, is incapacitated for the attempt by nervousness: and just in the same way the Stammerer is nervous, and his nervousness renders him incapable of natural effort. His peculiarity is manifested, or is in danger of being so, every time he opens his mouth, and so the shortest monosyllable may, from fear of impediment, create the most ungovernable struggle. Thus the first words of sentences, though made up of easy elements, and such as would present no difficulty in another position, become severe stumbling-blocks, and often impassable obstacles.

Numerous Treatises on Impediments of Speech have at different times been given to the public; but in most instances these works have been intended more as advertisements of their authors as practitioners of the Curative Art, than as expositions of the *modus operandi* of cure. Mystical theories of the causes and means of cure have, of course, been prevalent—where outspoken simplicity would have been unprofitable. The ordinary policy with pupils, was to bind them to secrecy as to the processes employed. Pupils paid dearly for their knowledge: and the public could not expect to have the lucrative secret revealed in the pages of a thin octavo. No! the authors were wiser. The simple exercises which wrought success—or such measure of it as was attained—were cautiously committed on oath or on “honour” to the keeping of the pupil, but were carefully concealed from the public. The books were filled with learned-looking disquisitions on *volitions*, *associations*, *nervous discordancies*, and such popularly unintelligible subjects, to invest the Stammerer’s malady in the darkest and most profitable mystery.

Some authors have, however, treated practically of the subject; but in their theories of the cause, as well as prescriptions for the cure, there are strange diversities;—some writers ascribing the impediment to nervous and physical causes—for which they recommend *medical* treatment; others, to organic or structural causes—for which they recommend *surgical* operation;—some to habitual collapse of the lungs, removable by deep *inspirations*; some to irregular action of the diaphragm—correctible by strength and continuity of *expiration*; some to spasmodic disturbances of the glottis—for which they recommend a singing and *drawling* tone; some to mere hurry—for which they recommend deliberation and regularity of *rhythm*:

some find the chief source of difficulty in *vowels*, and direct attention mainly to the production of these elements; others declare *consonants* to be the worst, and recommend a *vowel prefix* to render them easy;—while others advise *slurring* the consonants, or altogether *omitting* them.

The Stammerer is gravely told in one work, that “a knowledge of the *cause* and *nature* of the different varieties of the impediment, is the only guide to the proper line of practice for its removal; *as this must invariably consist in the adoption of opposite and counteracting modes of speech!*” —as if the reverse of every wrong must needs be right, and as if truth varied its features with the ever changeful varieties of error!—When “doctors differ” so much about the “cause” and “nature” of the impediment, the Stammerer could have but little hope of a cure in this way, even were the theory of such knowledge being all-important, correct, and philosophical. But the rational, as it is experimentally the successful mode of procedure, is first to study the standard of correct articulation; not the varieties of imperfect utterance, and then not to go from one extreme to another, but, at every step to compare the defective with the perfect mode of speech, and so infallibly ascertain the amount, the kind, and the source of error.

The perfect success of this plan in practice, as well as its obvious reasonableness, recommend it hopefully to the Stammerer’s own exertions. There, perhaps, has seldom been a self-cured Stammerer; yet, we cannot think success impossible or improbable, if the directions given for his guidance are simple and explicit, and if the means recommended are natural, and directly calculated to be efficacious.

Let the Stammerer divest his mind of any perplexing theories he may have received as to the *cause* and *nature*

of his impediment, and set to work diligently to find out what natural speech is ;—to gather a clear idea of its processes,—we do not mean a minute anatomical acquaintance with the structure of the organs of speech, but a practical knowledge of the positions and actions of the mouth, etc., in modifying breath into articulate sounds. By this elementary work, he will be trained to close observation and analysis, without which he can do nothing. He will probably find that he knew little or nothing of the subject intuitively ; and he will be the less surprised that he had so often gone wrong, and that, being wrong, he had so sadly failed to rectify himself. Never was the axiom more emphatically true, that “ knowledge is power ;” for the Stammerer gains such confidence from this knowledge that he is almost immediately able to *check* his difficulties, and lessen the frequency of their recurrence. Daily increase of facility and preventive command over habitual errors, rewards continuous exercise ; until in the large majority of cases, perfect ease and unbroken fluency are attained.

Whether nervousness, imperfect or discordant volitions, or associations, or whatever else *can*, be the cause of impediment, the effect is mechanical derangement, and obvious *mismanagement of the vocal actions*. Ignorance of the natural principles of speech must manifestly increase the difficulty, for when a want of fluency is felt, the Stammerer, not knowing what are the actions necessary to the desired utterance, yields to the embarrassing influence of difficulty and ignorance, and splutters on at random, with tongue, eyes, head, trunk, hands, feet, and the whole frame in effort.

The first object, then, with the Stammerer, must be, to acquire a thorough knowledge of the *elements* of speech,—vowel and articulate, vocal and voiceless. He must practise

the elements separately, as well as in difficult arrangements, until he feels confident that he can utter them, in any order or combination ; and that, besides, he does so, by *conscious regulation* of every act of speech. A tyro flutist finds it one task to learn to *blow* his instrument, and another to *finger* it. So the Stammerer's task is twofold. His first step is to gain power over the *respiration*, and the next to bring under control the various organs of articulation. The relation which *breath* bears to speech, and the relation which the *sounding* part of the vocal instrument (the throat) bears to the *modifying* part (the mouth), must be clearly comprehended ; and then, with ordinary application, the power of playing on the instrument of speech should be acquired as readily as facility in blowing, tonguing, and fingering the flute.

By bodily exercise—riding, walking, running up hill, the use of dumb-bells or other gymnastics, bawling against the wind, or Demosthenically drowning the noise of the waves by the sea shore, or in any other available way, power of lungs, and a full development of the chest should be gained ; while constant watchfulness to check any bad *habits* must be vigilantly maintained.

Let the Stammerer work on hopefully, even though, for some time, he should seem to be “hoping against hope.” Command of the breathing in speech is one of the most difficult, as it is one of the most important powers to be perfectly obtained. While respiration is at fault, articulation is as powerless as the fingering of a flute would be to evoke music without the stream of air. Difficulty, therefore, must not be suffered to deter from persevering efforts, until the end is gained. That “consummation so devoutly to be wished” will assuredly, sooner or later, be the reward of hopeful industry.

PRACTICAL DIRECTIONS, EXERCISES, Etc.

A USEFUL exercise for the regulation of the breath may be obtained in *counting*. Thus, to acquire facility of silent respiration, count slowly and distinctly, with a free inhalation by mouth and nostrils *before each number*; carefully subduing the least tendency to audibility or suction in the act of inspiration, and heaving the chest naturally, without any upward action of the shoulders, or other bodily movement.

To gain power in retaining the breath and prolonging the expiration, count five, six, ten, twenty, fifty, or any greater practicable series of numbers, *with each breath*; and continue the exercise for several minutes, without allowing the chest to fall, or pausing longer than is necessary to inhale before each group of numbers.

The opposite nature of these two exercises will show that neither mode of respiration is intended to be exclusively adopted in speaking: they will develop power, and give command over the organs and actions of respiration; and while the one exercise will so far neutralize the effect of the other, as to prevent the formation of a habit in either way, they will exert such an influence on practice as will enable the Stammerer ultimately to regulate his respiration in any way, with natural ease, and more than ordinary effect.

When the formation of Voice has been perfected, and vowel sounds can be uttered without any unnecessary action, ungainliness, or peculiarity of tone, the Articulations, and especially those which are defective, should be separately and carefully studied. The breath obstructives, P,

T, K, should be practised first ;—then their vocal correspondents B, D, G ; and next their nasals M, N, NG. The differences and correspondences of the letters must be clearly understood, and all the difficulties of their combinations overcome by determined practice. (See preceding Dictionary of Sounds, Section Second.)

Attention should next be directed to the letters in *organic classes* : those formed by the lips should be taken first, as being in general the most difficult, and as being the most easily observed with necessary minuteness. The labial class of elements includes P, B, M, W, Wh, F, V.

The letters formed by the elevated point of the tongue should next be practised. These are T, D, N, L, R. For these the teeth may be considerably opened. They should be kept apart, in practice, at first, by a pencil, paper-cutter, or other convenient article, held between the teeth. The lips must be perfectly quiescent, and kept back against the teeth in the formation of all lingual elements.

The sibilant letters, S, Th, Sh, in which the tongue acts more horizontally, may be taken next. Some combinations of these elements will be found organically difficult, and will require energetic and patient practice. The teeth, for these letters, require to be *almost* closed : the lips must be carefully retained steadily in an open position, drawn back, and well separated at the corners.

The letters formed by the back or root of the tongue should now present but little difficulty. These are K, G, NG, Y. Let the teeth be well separated, and maintained motionless in their position—with the tongue drawn back, and its point as much raised as possible.

The principles of organic action being of such great importance in the cure of Stammering, we shall here add a summary of directions, with some further observations,

respecting the proper action of each part of the instrument of speech. We shall notice separately the *Lips*; the *Teeth*; the *Tongue*; the *Larynx*, and the *Head*; the *Thorax*, and the *Abdomen*.

THE LIPS.

The lips are in all cases the seat of much difficulty. An attentive study of the elementary formations will show that there is very little labial action really necessary in speech, and that projection, pursing, circular contraction, loose spreading, or any other outward motion of the lips, is a fault to be avoided by all who would speak with grace, and especially to be vigilantly guarded against by the Stammerer. He must literally "set a watch upon his lips" if he would conquer his impediment.

The external shape of the mouth, or rather the arrangement of the lips, is, in all persons, very much a matter of habit. Habitual ill-nature everybody looks for and recognizes on the lips; and there, sweet temper and cheerfulness have their calm abode. The soft and pliant texture of the lips is easily impressed by any habit; and even every passing emotion can mould their plastic substance to express it. Thus, we often—indeed generally—find fixed on these portals of the mouth a legible summary of the man. The lips of the vulgar and ignorant are "arrant tell-tales," which there is no belying; and mental superiority cannot conceal itself from their disclosure. Falsehood cannot utter itself by these "miraculous organs" of truth; but conscious rectitude, integrity, and virtue, shine through the lips, and give irrefragable evidence there, when other testimony is absent or doubtful.

Habits of speech are most especially operative in giving character to the lips. An acute observer can generally tell

by their aspect, even in repose, whether a person's articulation is good or bad ; and there are few Stammerers who do not show to the practised eye, an indication of their infirmity in the lips.

In many cases, pupils whose mouths were deformed by broad, thick, unwieldy, pouted, or down-hanging lips — the result of bad habits of speech, — have, by exercise, so managed to govern and adjust these organs, that the expression of the features has been completely altered. Let the Stammerer, whether his mouth is thus labially *deformed* or not, take prompt and active measures to acquire perfect control over the lips ; for the slightest twitch and least perceptible motion, may be so associated with some of his difficulties, that he cannot perfectly overcome the latter until this trivial-looking action is prevented.

The lips should move only *vertically* in articulation ; any lateral or horizontal motion is a blemish as well as an interference with the *expressive* power of the lips. Every modification of vowel sound may be perfectly made *within* the mouth, aided by the mere diminution or enlargement of the labial aperture. But this does not require any looseness or projection, — far less circular pursing — of the lips: the aperture may be lessened in any degree by approximation merely, and without altering the relative position of the lips and teeth. This mode of vocal action has the advantage, also, of grace and superior distinctness ; while to the orator it possesses the further recommendation of leaving the lips entirely at his disposal for the various emotional expressiveness of which they are pre-eminently capable. Let the Stammerer particularly attend to the disposition of his lips. To prevent their officious meddling with sounds over which they possess no legitimate influence, he must keep a constant restraint upon them, by drawing

them backwards as far as he can, and as closely against the teeth as possible. Let both ranges of the teeth be visible—not the whole length of the teeth—that would be to grin; nor their extreme edges only—that would be to simper;—but, by drawing back and separating the corners of the lips, let all the teeth be fairly, though not *fully* seen. By this sort of exercise, the thickest looking lip will soon be pared down to due proportion, and the very dangerous labial actions of Stammering will be perfectly subdued.

In connexion, however, with the above labial *position*, the following principle of labial *action* must be carefully observed. The upper lip should remain almost as motionless in articulation as the upper teeth;—the whole of the necessary labial action being confined to the lower lip. Thus in forming P, B, M, W, or Wh, the upper lip does not act downwards to the lower, but the lower lip rises to meet the upper. If the latter descend to the former, it will pull down the nostrils with it, and set the whole of the upper part of the face in motion. Till the Stammerer can articulate the labial letter without the least tendency to this facial action, he will not succeed in eradicating his defect: he will find that some of its strong roots lodge here. The articulations F and V, and the vowels *o* and *oo*, are the only other labial formations; but the former use only the lower lip, and the latter are less close approximations of both lips than W,—so that neither can in the least *require* the descending action which we condemn.

If it should be found difficult to keep the lips back and quiescent, a pair of silver hooks may be used to assist the muscles, which, at first, are often really powerless; but this aid should be dispensed with as soon as possible. The hooks grasping the corners of the lips, should keep them in the right position by means of an elastic tie fastened

behind the head. Or a thin pencil or ivory knitting pin may be placed within the teeth, in such a way as to hold back the lips ; but as this interferes with the action of the tongue, the hooks are to be preferred.

THE TEETH.

The upward pressure of the jaw is immense in many cases of Stammering. In natural speech, the action of the jaw is downward. To prevent pressure in the wrong direction,—the Stammerer must not substitute *pressure* in the right direction, but keep the jaw still—as motionless as if it had no hinge. When he can articulate in this way it will be easy to add a little smooth, downward action, to give the vowels fulness and purity.

The teeth must be very close, though not in contact, for Th, S, Z, and Sh ; the *thickness* of a paper-cutter may be inserted between them to retain them at this distance in practising these elements. For R, L, T, D, N, Y, K, G, NG, the mouth may be more open, and the *breadth* of an ordinary paper-cutter may be held between the teeth in practice, that the tongue may have room for independent action. If, however, the tongue is too much *tied* to the lower jaw to admit of such an elevation, or if the arch of the palate is disproportionately high, the opening of the teeth must be regulated by the ability of the tongue to strike on the palate. The teeth must never be kept so open as to prevent the *tip* of the tongue from articulating T and D with sharpness, or a bad habit of lingual action will be acquired.

The operation of separating the frænum which binds the point of the tongue downwards is a very simple one, and is to be recommended when there is a manifest inability to elevate the tongue.

A lateral motion of the jaw, and sometimes a horizontal one, with a general indecision of action, give much trouble in many cases of impediment. The foregoing modes of practice will tend to check these habits. When any object is held between the teeth, it should be retained *horizontally*. If it fall from the horizontal line, it will show that the jaw is retreating;—if it rise, that will indicate an advance of the teeth,—certainly a less serious fault than the other; but the correct position is for both ranges of the teeth to be exactly in line.

The teeth should never come in contact in speech. Even in forming the shut labial articulations, they should not be allowed to close. Some small object may at first be held between the side teeth in practising the labials; or, excepting for F and V, it may be held by the front teeth.

The rationale of all these modes of exercise, it will be seen, is *to reduce the action of speech* to the least possible amount. Were we to stop here, there might be a stiffness and ungracefulness of articulation remaining; but the student is fully informed, in other sections of this work, how to perfect the vocal action when obstructive and impedimental faults have been removed.

THE TONGUE.

The tongue must be understood to be an “*unruly member*,” only figuratively, and as representing the faculty of speech. The tongue itself is one of the most alert and obedient organs in the body. Within the little compass of the mouth, it throws itself, at the bidding of the will, into a score of different attitudes, with a dexterity, precision, and untraceable rapidity that would excite our highest admiration and astonishment, could we but witness them.

The fingers of a Thalberg or a Litz, which dazzle the eye with their fleetness over the keys of a pianoforte, are not half so nimble as this agile little member, which the least scientific, unlettered, unmusical—scold, can put through all its movements with lightning rapidity.

Besides its minuter changes of shape in forming vowels, this Protean member produces by its independent action and various configurations, no fewer than eight of the eleven actions of articulation; forming sixteen distinct elements of speech, namely, Th(in), Th(en), S, Z, Sh, Zh, R, L, T, D, N, H(ue), Y, K, G, Ng.

Many of the lingual letters present severe difficulties to the Stammerer, but very little impediment is caused by mal-action of the tongue itself. Numerous faults of articulation arise from its careless and untrained evolutions, but Stammering, and that cleaving to the roof of the mouth which produces such painful impediment, arises more from the pressure of the *jaw* than of the tongue. The upward actions of the tongue are made heavy only by the upward bearing of the jaw; and the continued pressure of this ponderous frame prevents the tongue from disengaging itself and falling into the bed of the mouth, as it otherwise naturally would.

To lighten the actions of the tongue, the Stammerer must keep his jaw *rigid*; and while doing so, he must develop the latent muscular energies of the tongue, by vigorous exercise. The various elements that are produced by the actions of the tongue should be rapidly run over—in natural sequence, from one to another; reiterated separately, and combined in any way that may be found difficult—until this member is fairly disciplined to good habits, and broken off from bad ones.

The tongue should never, in speech, be protruded between the teeth; it should never touch the lower teeth; it should never be pointed downwards to the bed of the jaw; it should never be thrust up within the palatal arch, as in the act of sucking; nor should the point of the tongue in any action deviate from the centre of the mouth.

In finishing its different articulations, the tongue should *completely* disengage itself, and fall back within the mouth, depressed and out of sight. The depression of the root of the tongue will be outwardly visible at the angle of the neck and chin.

Almost every Stammerer has tried to assist his tongue by putting pebbles in his mouth. In some cases, this has been done by "advice of the family doctor." And on what principle was such an expedient recommended? On no principle! but only because, forsooth, Demosthenes the renowned Inarticulate, who cured himself of certain faults of speech, is said to have practised with pebbles in his mouth. And on what better than this no-principle ground was the art of surgery disgraced some few years ago, by operations on the uvula and tonsils to remove impediments of speech! *Why* did reckless operators turn up their professional cuffs to such barbarous mutilations? Oh, on no *principle*! but because, in operating on a boy for deafness, some one said that the boy had got accidentally cured of some defect of speech which he was then affirmed to have had before the operation.

Hundreds of unfortunate Stammerers were agonizingly mutilated while this delusion lasted. But "*experientia stultos docet*:" though the absurdity of the operations did not prevent their infliction on multitudes of too confiding dupes, the inefficacy of the knife to *excise a habit* was too

manifest after the suffering had been endured ; and the practice was at last almost entirely abandoned. *

The Stammerer has high authority and ample precedent for *trying* the effect of pebbles in his mouth ; but he may, perhaps, be satisfied to spare himself the chance of a fit of indigestion should he swallow one of them, when we tell him that he would find pebbles in his mouth as useless as pebbles in his pocket. Anything placed below the tongue pulls the point down, by pressing on the frænum—a bad position ; and anything placed above the tongue would prevent articulation, and be in rather a dangerous position for an inward slip. Demosthenes did not cure himself by *pebbles*—but by indomitable energy and perseverance. If the pebbles at all assisted him, they did so only by keeping his teeth open. But Demosthenes was not a Stammerer. His defect was the common one of inability to sound the letter R. Perhaps he had the Stammerer's habit of snapping his teeth close at every articulation, and the pebble between the jaws would be very useful in correcting this. At all events, let not the Stammerer *trust* to anything out of himself, to any mechanical assistance, or unnatural expedient, for his cure ; but let him fairly follow the example of the great Grecian, and devote his energies to the task of cultivating his natural powers, and, like Demosthenes, he will succeed in making himself a far better speaker probably than he ever would have been without the stimulus of impediment.

* Not completely, we are sorry to add. A gentleman called on the Author about two years ago (in 1860) who had recently recovered from six months' suffering in consequence of an attempt by a local surgeon of the highest celebrity, to remove a defect of articulation by an operation on the mouth. This was not a case of stammering, but of a peculiar loose nasal breathing in forming the sibilant letters. The effect of the defect resembled that which arises from fissure of the palate ; but as the obstructive letters could be articulated, the absence of palatal mal-formation was at once manifest ; and the Author undertook his cure, which was accomplished in a fortnight.

THE HEAD.

The upper jaw is a fixture, and consequently has no motion in speech ; but the Stammerer, apparently ignorant of this fact, strives to disengage his locked teeth by upward effort, and, of course, throws back his head for this purpose. The mobile lower jaw goes up too, however, and so he tosses, and shakes, and jerks his head in vain, till nature comes to his assistance, and the necessities of respiration force his mouth open. These deforming spasms are, of course, involuntary—but *ignorance originated them*. Had the Stammerer, at his first misguided effort, been told how to effect the pressing purpose, the faulty habit would not have been established : it was not without many repetitions and painful associations that the random effort acquired its muscular attachments and spasmodic force.

Many speakers besides Stammerers would be the better of the Stammerer's practice to control habits of loose swinging, tossing, or nodding of the head. A deaf person might often think a speaker was angrily reproving or vehemently dogmatising by the "laying-down-the-law"-like motion of his head. Other orators seem to imitate the action of a pugnacious ram, to *batter* their opinions into their auditors' skulls : and others incessantly *shake* their craniums, as if to create a froth and fermentation within. The head is an important oratorical weapon, and speakers would do well to keep it from such extravagancies. The "seat of intellect," tossing and swinging as we often see it, is at best but a light-headed exhibition. Weighty thoughts, one would think, would tend to keep it steady !

To check the difficulties associated with the peculiar head actions of Stammering, the head must be held firmly

upon the neck—the chin horizontal and drawn inwards. This position must at first be strictly maintained; for the slightest difficulty with any element, would probably induce the whole of the old spasmodic series of stammering actions, if the muscles of the neck were allowed to relax. When the habit of moving the head in connexion with articulation is broken, no farther care about the position of the head will be necessary:—but until there is nothing to fear from its freedom, the more it is reined in preventively, the better.

Another important advantage gained by this position of the head, is the depression of the larynx—the instrument of voice—and the consequent deepening of the voice. The glottal membranes are put in the easiest position for vocal vibration—the root of the tongue is depressed—the cavity of the mouth enlarged—the arch of the fauces spread—and the whole organism placed in the most favourable position for easy articulation. By this practice, too, the voice may be permanently deepened and mellowed, and greatly improved in clearness and strength.

THE THORAX.

The chief inveteracy of Stammering is generally connected with the respiration, and a faulty action of the thorax. In many cases there is a considerable degree of pain attending the compressive action of the chest; and in some, the paroxysms of impediment produce such violent writhings of the body, that the aspect of the chest is that of decided deformity.

Contraction of the chest depresses the diaphragm, and depression of the diaphragm expands the abdomen; so that a clear outward index of error is furnished, both in

the thoracic and abdominal actions, to assist in the correction of faults.

This is the most difficult kind of mal-action to correct in Stammering. The Stammerer is in constant dread of difficulties, and—as the natural consequence of fear—his chest falls, and the whole series of habitual spasms is induced in anticipation of a failure. It will be some time before the Stammerer who labours under much of this species of impediment will acquire sufficient confidence to make rational preparations for encountering a dreaded combination; and often he will fall prostrate before a terror-inspiring word. The lack of confidence disables his chest, and the want of breath renders useless any effort at articulation.

If the respiration be not perfectly free, there can be no ease of speech. The common rule given to Stammerers, is to *draw the abdomen inwards* during expiration; but there is danger of this being overdone. In some cases a forcible inward action of the abdomen constitutes a leading feature of the impediment. We would, for the management of respiration, recommend the same policy that we have prescribed for articulation, namely, to reduce the action to a minimum, and to admit no motion that is not indispensably necessary.

Let the chest be well expanded, and while the breath is expelled, either in slow continuous currents, in broken and abrupt jets, or in any other way—even with all practicable force of voice—*let the chest be kept expanded*, and use as little and as gentle abdominal action as possible. The action which really effects the purpose of expiration, is internal—namely, that of the diaphragm, and a slight flattening of the abdomen is all that naturally results from its action on the lungs.

The organ of force in speech is not the chest—not the diaphragm—not the mouth, but the *pharynx*, at the back of the mouth, above the windpipe. The sides of the pharynx must be so elastic as to expand with the slightest pressure of air, and the lips and tongue, in articulation, must be so passive as to yield to the slightest impulse of pharyngeal pressure. Force thrown either into the act of expiration, or the actions of articulation, must result in a straining of the vocal organ, or a restraint on the free issue of breath through the mouth; and all varieties of Stammering are characterized in various degrees by these two modes of mechanical error.

With reference to respiration, it must further be observed, that many persons—Stammerers especially—never, except, perhaps in yawning, experience a true inflation of the lungs! Hence arises much of the common tendency to pulmonary disease. The lungs require room for their healthy expansion; and if the walls of the chest are not sufficiently raised, the air does not ramify to the extremities of the lungs. These consequently become by pressure attached to the inner lining of the chest; or the smaller air passages, from the want of mechanical inflation, close up, and become the seat of tubercular disease.

In connexion with impediments of speech, the power of voluntary inhalation is often altogether wanting, and the processes of respiration require to be made manifest by suction and ejection of water through a tube, in order to give the pupil a perception of the nature of inspiration and expiration. As the blind-born have no idea of the nature of vision, so those destitute, as we may say, of the faculty of breathing, cannot at first comprehend the nature or the necessity of vocal respiration. This difficulty must be

overcome before any progress can be made in the eradication of Stammering.

We would now, in conclusion, recapitulate some fundamental facts, and impress on the Stammerer the principle which forms the basis of all exercises for the practical application of our directions on the organic positions and actions.

All *voice* is produced in and by the *glottis*; and all *whispered* emissions of breath also emanate from the glottis. All *articulations* are produced in and by the *mouth*; all *vowel* variations are also caused by the configuration of the mouth. The production of the *material* of speech is one thing, and the *moulding* of that material into articulate elements and syllables, is quite another process. Two entirely different sets of organs are brought into operation in the two acts: as different as the furnace, boiler, and other *steam* apparatus of a locomotive, are, from the piston, rods, and wheels, to which the steam communicates *motion*. The human speaking machine is, however, much more perfect than this most perfect and wonderful work of art; for the former has independent motion in all its parts, and is capable of indefinite combinations, while the latter is fixed to one unvaried round of movements.

“In human works, though laboured on with pain,
A thousand movements scarce one purpose gain;
In God’s, one single, can its end produce,—
Yet serves to second, too, some other use.”

The speaking machine is capable of performing all its functions *separately*;—no two actions are necessarily *connected*:—and since each independent action must result from a separate volition, it follows that speech, in its most rapid utterances is but an arbitrary arrangement, a conventional sequence, of separate, and consequently distinctly

separable acts of the will, and of the obedient organs of respiration, voice, and articulation.

The Stammerer must study to apply this principle. As soon as he has strengthened his voice, and brought his chest into natural action, let him take the articulations one by one, and utter their *exact sounds*—separately, and with vowels prefixed and subjoined. Then let him, in reading words containing the different elements in their various positions and combinations, dwell a little on the letter to which his practice is directed, that he may the better observe whether its formation is in all points, correct. After a very brief practice of this analytic process, the Stammerer who yesterday seemed in danger of strangulation in his efforts to articulate *pity, paper, package, pepper, pocket, puddle*, and such words, will to-day enounce them without difficulty, and almost with ordinary fluency. There is nothing unnatural in this analytic pronunciation ; it is merely cautious creeping before walking, wary walking before running ; and all that is wanted to give ordinary compactness to the utterance is *facility* of action, to enable the vocal and articulate organs to perform their offices almost simultaneously. For let it be carefully noted, that however inseparable the elements of a syllable may seem to the ear, they are in reality, and cannot be otherwise, separate and wholly independent formations.

This is the most important principle the Stammerer can acquire. It breaks at once the *associations* from which the worst features of his impediment resulted, and thus almost immediately sets him free from the galling fetters of spasmodic tyranny. So far as this principle goes, it is perfect,—it gives nothing to unlearn :—and all that it leaves to be accomplished are fluency and natural rapidity. These are certain acquisitions to the industrious, and they

•

are speedy acquisitions to those who unite aptitude, intelligence, and a spirit of ardour to the equally necessary spirit of patient industry.

After the basis of a cure is laid in a knowledge of natural principles, its perfection, and especially the time occupied in its perfection, will depend entirely on the aptitude, industry, and self-control of the pupil. How long the Stammerer may take in effecting his own cure, we cannot determine. But whatever sacrifice of time and labour it may cost him, though he should spend the leisure of twelve months in the work, the object is worth it all! The cure is not to be considered doubtful in any case unconnected with structural mal-formation,—nor always even then,—it is merely a question of *time*, when proper means are employed. Let the Stammerer, then, to whom oral instruction is beyond convenience, either of purse or position, take courage, and hopefully commence the task himself. He must “work with a will” for it is no task for the faint-hearted.—“Courage is half the battle!”

Again we repeat, but in other words, the nature of the Stammerer’s undertaking. He has to take his speech to pieces, as a watchmaker does a watch, and examine all the cogs, and pins, and pivots, of its mechanism; then, having discovered and corrected the defects of the separate parts of the machine, he must proceed carefully to replace them, *one by one*, in natural order, adjusting each to easy action before he passes to the next! Such, precisely, is the curative process: it is not a tedious one, for the elements of speech are few and definite in number, but though it were irksome, perseverance would sooner or later bring it to an end! And the Stammerer will then, not only have his speaking machine in order, and free

from obstructions and irregularities, but under superior control, from his intimate acquaintance with its structure and modes of action.

ARTICULATIVE EXERCISES.*

THE following arrangements of letters are *organically difficult*. Their practice forms an excellent means of improving articulation and bringing all parts of the mouth under control. To Stammerers, especially, they will be found of the highest utility, in perfecting fluency after the power of free analytic enunciation is acquired.

A vowel sound should be prefixed or subjoined to each of the letters in practice, and the combination repeated frequently with one flow of breath.

LITERAL EXERCISES.

BREATH ARTICULATIONS.

p t t p p t p t p t p t p t p t
 p k k p p k p k p k p k p k p k
 t k k t t k t k t k t k t k t k t
 p t k p k t t p k t k p k p t k t p
 p f f p p f p f p f p f p f p f
 f w h w h f f w h f w h f w h f w h f w h f w h
 p f w h p w h f f p w h f w h p w h p f w h f p
 f t h t h f f t h f t h f t h f t h f t h f t h
 f t h w h f w h t h f w h t h w h f w h f t h w h t h f
 t h s s t h t h s t h s t h s s t h s t h s
 t h s h s h t h s h t h s h t h s h s h t h s h t h s h
 s s h s h s s s h s s h s s h s s s h s s s h
 t h s s h s h s s t h s s s h t h s h s h t h s h

* For other exercises of the same nature, arranged for elocutionary practice, see the Author's "Principles of Elocution."

VOICE ARTICULATIONS.

b d d b b d b d b d d b d b b d
 b g g b b g b g b g g b g b b g
 d g g d d g d g d g d g g d g d d g
 b d g b g d d b g d g b g b d g d b
 b v v b b v b v b v b v v b v b b v
 b w w b b w b w b w b w w b w b b w
 b v w b w v v b w v w b w b v w v b
 v w w v v w v w v w v w w v w v v w
 v m m v v m v m v m m v m v v m
 w m m w w m w m w m m w m w w m
 v w m v m w w v m w m v m v w m w v
 v t h t h v v t h v t h t h t h v t h v t h
 t h z z t h t h z t h z t h z z t h z t h z
 v t h z v z t h t h z v t h v z z v t h z t h v
 t h l l t h t h l t h l t h l t h l l t h l t h l
 v t h l v l t h t h v l t h l v l v t h l t h v
 t h z h z h t h z h t h z h z h t h z h z h z h t h z h
 z z h z h z z z h z z h z z h z h z z z z h
 z t h z h z z h t h z z h t h z h z z h z t h z h t h z
 z r r z z r z r z r z r r z r z z r
 r l l r r l r l r l r l l r l r l
 r n n r r n r n r n r n n r n r n
 n l l n n l n l n l n l l n l n n l
 r l n r n l l r n l n r n r l n l r
 n m m n n m n m n m n m m n m n n m
 n n g n g n n n g n n g n g n n g n g n n g
 m n g n g m m n g m n g m n g n g m n g m n g
 n m n g n n g m m n g m n g n n g m n g m n
 y z h z h y y z h y z h y z h y z h y y z h
 y w w y y w y w y w w y w y y w

VERBAL EXERCISES.

THE passages that follow contain instances—1st, of *Double Articulations* ; 2nd, of *Difficult Combinations* ; 3rd, of *Alliterations* and *Difficult Sequences* ; and, 4th, of *Miscellaneous Difficulties*.

The eye is directed by *italics* to the leading points for practice.

DOUBLE ARTICULATIONS.

Hear both elements distinctly, with as little hiatus as possible.

A figure *regal* like, with solemn march,
Goes slow and stately by ; whilst *they*, distill'd
Almost to jelly with *the* act of fear,
Stand dumb, and speak *not* to him.

O ! studied *deceit* ! (not study)

A sad *dangler*, (not angler.)

A languid *dame*, (not aim.)

His *crime* moved me, (not cry.)

To obtain *neither*, (not either.)

He could pain *nobody*, (not pay.)

Goodness *centres* in the heart, (not enters.)

Luxurious *soil*, (not oil.)

He will *prate* to anybody, (not pray.)

Make clean our hearts within us, (not lean.)

In bulk as *huge* as whom the fables name of monstrous size,
(not eyes.)

Can the Ethiopian change his *skin*, (not kin,) or the leopard his
spots ? (not pots.)

Whose beard *descending* swept his aged *breast*, (not beer.)

A constant smirk on the face, and a whiffing activity of the body,
are strong indications of *futility*, (not utility.)

Fear is a good watchman but a *bad* defender.
 Hypocrites first *cheat the* world, and at last, too, themselves.
 One vice is more expensive *than five* virtues.
 Spend time in good duties, and treasure in good deeds.
 Time is so swift of foot *that* none can overtake it.
 Trust *not* too far, and mistrust *not* too fast.
 Use soft words, but hard arguments.
 A little *leaven* leaveneth the whole lump.
 Vaunt-couriers of oak-cleaving thunderbolts.
 His palsied hands seemed to wax strong.
 In horrid climes where Chiloé's tempests sweep.
 Our soul loatheth *this* light bread.
 Was it a wailing bird of the gloom,
 Which shrieks on the house of woe all night ?
 And on the bridge of his well-arched nose
 Sit laughter plumed, and white-winged jollity.
 Learn to live as you'd desire to die.
 Doing nought is next to doing naughtily.

DIFFICULT COMBINATIONS.

Give each of the elements its full separate audibility, without hiatus.

Yet the lark's shrill *fi*fe may come.

And the floors shall be full of *w*heat, and the fats shall overflow with wine and oil.

Behold, I will do a thing in Israel, at which both the *e*ars of every one that heareth it shall tingle.

What though each spark of earth-born rapture fly !

In septennial parliaments, your representatives have *s*ix years for offence, and but one for atonement.

Can the husbandman look forward with assured confidence to the expected increase of his fields ?

Now on the leafless *y*ew it plays.

Long has it hung from the cold *y*ew's spray.

Oft by that *yew* on the blasted field.
 Examples prevail when *precepts* fail.
 Frequent *good* company.
 Put *the* cut *pumpkin* in a *pipkin*.
 Then pealed *the* notes omnipotent to charm,
 And the loud *tocsin* tolled their last alarm.
 My little ones kissed *me* a thousand times o'er.
 In praising sparing be, and *blame* most sparingly.
 Malice seldom wants a mark to aim at.
 We must not *blame* fortune for our faults.
 We must *look* to time *past* to improve *what* is to come.

ALLITERATIONS AND DIFFICULT SEQUENCES.

These sentences should be repeated again and again as rapidly as may be done with distinctness.

Poor men want much, but wealthy men want more.
 Rags and liberty rather than links and riches.
 Let reason rule your life.
 A versifier wants a very wonderful variety of words.
 Hope, open thou his eye to look on high, and his ear to hear.
 Teach thy heart the holy art of humbly hearing truth.
 Robert loudly rebuked Richard, who ran lustily roaring round the lobby.

Twice 2, and twice 2, with two times twice 2, 2 and twice 2, are twenty-two.

Thrice three, and three times 3, with three-fold threes, and 3, and 3, are thirty-three.

Four times 4, and 4, with 4, and 4, and four times 4, are forty-four.

Five fives, and four fives, with five and five, are fifty-five.

Six times 6, and six times 6, minus 6, are sixty-six.

Seven times 7, and thrice 7, with 7 more, are seventy-seven.

Eight times 8, and one 8, with 8 and 8, are eighty-eight.

Nine times 9, with 9, and 9, and no more nines, are ninety-nine.

Geese cackle, cattle low, cocks crow, crows caw.

I snuff shop snuff,—do you snuff shop snuff?

Fill the sieve with thistles, then sift the thistles in the sieve.

I like white wine vinegar with veal very well.

Men's manners, more than merit, make or mar their fortunes.

Much water makes the meal-mill wheel work well.

Learn what you like to learn, delight in learning what you learn,
and learn to like things laudable.

He humbly honours the hoary head.

Hope is the highway to happiness.

Pull the poor fool out of the full pool.

A swan swam over the swell—swim, swan, swim! The swan
swam back through the swell—well swam, swan!

Swimmers in sin soon sink in sorrow.

Money makes many men mad.

Value virtue more than fame or fortune.

Virtue finds favour with all, though few fully follow it.

Yield not, you young, to useless yearnings, nor yet ye in years.

Eye her highness, how high she holds her old haughty head.

The witwal wings her weary flight, where winter winds wither the
waving woods.

A merchant's mismanagement makes much mischief to the mer-
cantile machine.

Vice oft wears variegated velvet, while virtue walks in vulgar
velveteen.

False friends are far more formidable than fiercest foes.

Several sailors saw the sottish soldier stagger senselessly to his
solitary sell.

Captain Cunningham cut and come again.

The soup must be heated before he eat it.

Peter Piper's peacock picked a peck of pickling pepper from a
paper packet. Did Peter Piper's peacock pick a peck of pickling
pepper from a paper packet? If Peter Piper's peacock picked a
peck of pickling pepper from a paper packet, where's the paper packet
whence the pretty speckled peacock picked the peck of pepper?

MISCELLANEOUS.

Such passages as the following require very minute distinctiveness of utterance.

Chaste stars, (not tars.)

Cold ground, (not coal.)

Irish jews, (not shoes.)

Yet half I see the panting spirit sigh, (not spirit's eye.)

Oh ! the torment of an ever-meddling memory, (not a never-meddling.)

Art thou afeard to be the same in thine own act and valour, as thou art in desire ? (not thy known.)

A warm tear gushed,—the wintry air

Congealed it as it flowed away ;

All night it lay an ice-drop there, (not a nice drop)

At morn it glittered in the ray.

“ Give the cat *stale* bread.” “ The cat's tail, mamma ?” “ Silence, child !”

[END OF PART THIRD.]


VOCAL PHYSIOLOGY

Part Fourth

VISIBLE SPEECH

Part Fourth.

VISIBLE SPEECH.

INCE the first publication of the "Principles of Speech and Dictionary of Sounds," the author has developed a more minute analysis of speech-sounds, complete for all languages and phonetic effects, and coupled with a scheme of symbols expressive to the eye, of the organic formation of the sounds they represent. The graphic result is hence called VISIBLE SPEECH.

The following are the fundamental principles of the symbolization:—

VOICE—VOWELS.

The symbol of Voice is a *straight line*, because that is proximately the shape of the glottis in sounding voice. Every vowel is an utterance of voice ; hence every vowel is represented by a straight line.

The vowel lines are subject to the following varieties, to express the modification of the sounds by the various attitudes of the tongue, etc. :—

PRIMARY VOWELS.

l	I	f
J	l	l
J	I	l

WIDE VOWELS.

J	I	f
J	l	l
J	I	l

ROUND VOWELS.

ɪ ɛ ɜ
 ʊ ʉ ʘ
 ʏ ʘ ʉ

WIDE ROUND VOWELS.

ɪ ɛ ɜ
 ʊ ʉ ʘ
 ʏ ʘ ʉ

TONGUE—CONSONANTS.

The symbol of the tongue is a *curve*, having *proximately* the same outline as the tongue presents in the formation of the consonants. Hence every lingual consonant is represented by a curve.

The consonant curves are subject to the following varieties, to express the modification of the sounds by the shape and mode of action of the tongue, etc.

CONSONANT CURVES.

ɔ ɔ ɛ ɛ ɑ ɑ ɔ ɔ ɜ ɜ ɔ ɔ
 ɔ ɔ ɜ ɜ ɑ ɑ ɔ ɜ ɜ ɜ ɔ ɜ

VOCAL CONSONANTS.

A straight line within a curve shows that the consonant action is accompanied by voice, thus:—

ɛ ɛ ɛ ɛ ɑ ɑ ɜ ɜ ɜ ɜ ɜ ɜ
 ɔ ɜ ɜ ɜ ɑ ɑ ɜ ɜ ɜ ɜ ɜ ɜ

The learner will perceive that there are *thirty-six* vowels and *forty-eight* consonants included in the above scheme; but that there are only *nine* varieties of vowel lines, and *six* varieties of consonant lines; the nine vowel forms being repeated with inversion, four

times, and the six consonant forms being repeated with inversion, eight times, with the uniform differences which are now to be explained.

HIGH VOWELS.

The roof of the mouth is an arch. When the convex tongue is raised towards the *front* of the arch—behind the upper teeth—the voice has the quality of **f** as in (eel); when the tongue is raised as closely to the *back* of the arch—the soft palate—the voice has the vowel quality of **l**; and when the middle of the tongue is raised as closely to the *top* of the arch—the hard palate—(involving a high position of both back and front of the tongue), the voice has the vowel quality of **I**.

The discriminating mark on the straight line is on the right side for Front sounds; on the left for Back sounds; and on both sides for Top or Mixed sounds.

EXERCISE.

Repeat the three High vowels a number of times, until you feel that you can distinguish them by lingual position, as well as by sound.

f	I	l	f	l	I	l	I	f
l	f	I	I	l	f	I	f	l

You may not at first be accurate with **l** and **I**, but the familiar **f** (ee), will give you an unmistakable starting point; and if you consider **l** and **I** simply as *ee* formed respectively at the Back and at the Top of the

tongue, you will soon be able to oscillate the tongue with certainty, from one to the other of its three high positions.

MID-VOWELS.

Keeping the tongue in the Front of the mouth, as for **ɪ**, but slightly depressed and drawn Backward, so as to enlarge the Front cavity, the voice has the vowel quality of **ɪ** (*a* as in *ale*).

Keeping the tongue at the same elevation, but drawing it farther back, the vowel quality is **ɪ**. This has been called the natural vowel, because it is unmodified by either Back or Front quality. It is the indefinite sound (**ɪ**) heard (**ɪ**) from (**ɪ**) drawling speakers. As a linguistic sound it is the unaccented *e* of French and German.

Still keeping the tongue at the same Mid elevation, but drawing it to the Back of the mouth, so as to give the voice a slightly guttural quality, the vowel sound is **ɪ** (as in *up*).

EXERCISE.

Repeat the three mid vowels a number of times, until facility is obtained in discriminating them by position as well as by sound.

ɪ	ɪ	ɪ	ɪ	ɪ	ɪ	ɪ	ɪ	ɪ
ɪ	ɪ	ɪ	ɪ	ɪ	ɪ	ɪ	ɪ	ɪ

LOW VOWELS.

By opening the mouth widely, so as to enlarge its respective cavities to the utmost, a series of three Low vowels will be obtained.

The Low Back vowel (J), has the deep guttural effect of the interjection of disgust, *ugh!*

The Low Front vowel (I), has the effect of the exclamation of wonder, *eh!*

The Low Mixed vowel (L), has a sound intermediate to J and I, as if in the attempt to pronounce these elements together.

The mere separation of the jaws will not suffice to produce the Low vowels. The effective action is that of the tongue, which should be depressed independently of the opening of the mouth.

In the exercise which follows, a pencil may at first be held by the teeth, that the separate action of the tongue may be felt.

EXERCISE.

Repeat the three Low vowel sounds until facility is attained in discriminating them by position as well as by sound.

J	I	L	J	L	I	L	I	J
L	J	I	I	J	L	I	L	J

The sounds of the nine primary vowels should be well practised, in order that the necessary foundation may be laid for the derivative classes of Wide and Round vowels.

WIDE VOWELS,

The Primary vowels have all more or less of a semi-consonant effect, arising from a slight degree of fricativeness in their narrow channels. They are, in con-

sequence, strongly organic. The wide vowels are comparatively indefinite in organic quality—as if loosely and carelessly formed;—but they are purely sonorous, and free from friction. Every Primary vowel has its Wide variety. Compare the vowels in *eel* and *ill*;—for that purpose giving the sounds the same length; and endeavor to *feel* the organic cause of their difference. This will be found to be—the one source of Wide quality in all cases,—namely, a *widening of the posterior cavity of the mouth*—the pharynx—so as to neutralize the anterior effects of the Primary vowels.

SOUNDS OF THE WIDE VOWELS.

High Back Wide. .ɹ Unaccented ŭ in the terminations,
tion, lions, etc.

Mid Back Wide. .ɹ a in *ask, path, etc.*

Low Back Wide. .ɹ a in *alms, father, etc.*

High Front Wide. .ɹ i in *ill*.

Mid Front Wide. .ɹ a in *air*, unaccented e in *ment, ness, etc.*

Low Front Wide. .ɹ a in *at*.

High Mixed Wide. .ɹ unaccented ē, ĭ.

Mid Mixed Wide. .ɹ article a; unaccented a in *chapman, at-tack*; unaccented er.

Low Mixed Wide. .ɹ er in *her*.

ROUND VOWELS.

The eighteen vowels thus far introduced are all formed without any action of the lips; a second series

of precisely the same formation, is differentiated from the first by the addition of "Round," or labial quality. In practising the first set of vowels the lips should be spread, so that the edges of the teeth are visible. For the Round vowels the lips must more or less cover the mouth. There is no need for *projecting* the lips; the opening between them has simply to be varied from narrow to broad. A narrow opening is associated with High vowels; a broad opening with Low vowels; and an intermediate opening with Mid vowels..

Round quality has the uniform symbol of a bar across the straight line (+).

Any of the lingual vowels may be Rounded; and any of the Round vowels may be delabialized by spreading the lips. This may be best done, experimentally, by means of the fingers. The result will then be independent of the will of the speaker.

The High Back Round vowel (ɤ̞), has the sound of oo,—which requires narrow labial aperture. Delabialize this sound, by mechanically spreading the lips, and the true sound of the High Back Primary vowel will be heard.

In this way unknown sounds can be readily and certainly produced. The Low Back Round vowel (ɤ̞), for example,—which has a broad labial aperture,—has the sound of *aw*. Delabialize this sound, and you will hear the true quality of the Low Back Primary vowel.

SOUNDS OF THE ROUND VOWELS.

High Back Round... ʊ oo as in *too*, *rue*.

Mid Back Round... ɔ o as in *go*.

Low Back Round... ɔ aw as in *awe*, *all*.

High Front Round... ʏ ü (German).

Mid Front Round... ɛ û (French).

Low Front Round... ɛ ö (German), *eu* (French).

High Mixed Round... ɤ u (Swedish).

Mid Mixed Round... ɤ (Irish), as in *come*.

Low Mixed Round... ɤ Provincial English.

The precise sounds of the symbols ʏ, ɛ, ɤ, will be obvious by delabializing the sounds. Thus: ʏ delabialized is *ee*; ɛ delabialized is *ā*; and ɤ delabialized is ɛ, *eh*, *ell*.

SOUNDS OF THE WIDE ROUND VOWELS.

High Back Wide Round... ʊ oo as in *good*, *book*.

Mid Back Wide Round... ɔ o as in *ore*.

Low Back Wide Round... ɔ o as in *on*.

High Front Wide Round... ʏ u in *guid*, (Scotch).

Mid Front Wide Round... ɛ variety of û, (French).

Low Front Wide Round... ɛ ow in *now*, (London).

High Mixed Wide Round... ɤ u, (Swedish).

Mid Mixed Wide Round... ɤ *homme*, (French).

Low Mixed Wide Round... ɤ *Sir*, (Irish).

The preceding classifications of vowels were, before publication, tested experimentally, in the writing of foreign sounds of almost all varieties, and of arbitrary

peculiarities and individualisms. No linguistic sound, or combination of sounds, was found that could not be expressed with perfect legibility by the Visible Speech elements. But their chief practical application, hitherto, has been in teaching and recording the various unseen or unheard positions of the vocal organs; so helping the deaf to pronounce speech, and teachers of the deaf to give definiteness to their instructions. To hearing students, the Visible Speech symbols will be even more directive, whether in application to their own tongue, or to any foreign language.

GLIDES.

Glides are transitional, non-syllabic sounds, formed while the organs change their position. With a more open and fixed configuration, glides would be vowels; and with a closer formation, the organic glides would be consonants. Being thus a sort of intermediate sounds, the symbols of glides unite a straight line and a curve. Thus:—

Back glide . . . ɿ a non-syllabic guttural sound.

Top glide . . . ɤ “ “ sound of *e* as in *pie*,
boy,

Point glide . . . ɹ a non-syllabic sound of *r*, as in *ear*,
air, *err*.

Lip glide . . . ɰ a non-syllabic sound of *oo*, as in
now, *out*.

Voice glide . . . ɸ a non-syllabic sound of *l*, as in
weary, *fiery*.

Round glide . . ɹ̥ a non-syllabic sound of slightly labialized quality.

CONSONANTS.

Consonants are close positions of the organs of speech, producing a sound of friction, or of stoppage, *within the mouth*.

All consonants are either vocal or non-vocal; *i. e.*, voiced or whispered.

The sound of the *Back* consonant is caused by squeezing the breath (C) or the voice (€) between the Back of the tongue and the soft palate, as in *nach, tage*, (German). The sound of the Top Consonant is caused by a similar squeezing between the Top of the tongue and the hard palate, as in *hue, you* (O O). The sound of the *Point* Consonant is caused by a similar squeezing between the raised Point of the tongue and the upper gum, as in *etre** (U W) *ray*. The sound of the *Lip* Consonant is caused by squeezing the breath (C) or the voice (€) between the Lips, as in blowing to cool; *wie*, (German), *b*, (Spanish).

MIXED CONSONANTS.

The Primary curve modified by the effect of its opposite curve gives a series of four Mixed Consonants:—

Back Mixed. . C The sound of the Back curve modified by a close position of the Lips, as in *sough* (Scotch).

* A non-vocal Point consonant is heard in English where *r* precedes a non-vocal consonant in the same syllable, as in *arch, harsh, heart, harp, hark* ; but the glide (*v*), is more frequently employed in such cases.

Top Mixed...Ω The sound of the Top curve modified by raising the Point of the tongue, as in *sh*, *ʒh*.

Point Mixed...Ϸ The sound of the Point curve modified by raising the Top of the tongue, as in *s*, *ʒ*.

Lip Mixed...Ϸ The sound of the Lip curve modified by the Back of the tongue, as in *wh*, *w*.

DIVIDED CONSONANTS.

The sounds of the preceding consonants are all emitted through a central oral channel, but when the organs are so placed as to obstruct the central channel, and open a passage on one or both sides of the obstruction we have a series of sixteen Divided consonants:—

Back Divided.....Ɑ Ɑ as in *laodh*, (Gaelic).

Top Divided.....Ϸ Ϸ as in *gli*, (Italian).

Point Divided.....ω ω as in *l*.*

Lip Divided.....Ɱ Ɱ as in *f*, *v*.

Back Mixed Divided .Ɑ Ɑ as in Ɑ *labialized*.

Top Mixed Divided ..Ϸ Ϸ as in *ll*, (Welsh), *lh*, (Zulu).

Point Mixed Divided .ω ω as in *th*, *dh*.

Lip Mixed Divided ...Ɱ Ɱ as in Ɱ Ɱ *gutturalized*.

*The non-vocal Point Divided consonant is heard when L precedes a non-vocal consonant in the same syllable; as in *else*, *felt*, *quilt*, *health*, *self*, *silk*.

SHUT CONSONANTS.

When the oral passage is closed, so as to prevent emission of breath, we have a series of eight shut consonants—four non-vocal and four vocalized. The non-vocal shut consonants have no sound but the slight puff which accompanies the relinquishment of the shut positions, thus:—

Back Shut.... \square Stoppage by means of the Back of the tongue, as in *key*.

Top Shut.... \square Stoppage by means of the Top of the tongue, as in *chew*.†

Point Shut... \square Stoppage by means of the Point of the tongue, as in *tea*,

Lip Shut..... \square Stoppage by means of the Lips, as in *pea*.

While the organs are in these Shut positions, a murmur of voice may be produced. The sound can be only momentary, because there is no issue of breath.

Back Shut Voice... \ominus *g* as in *go*.

Top Shut Voice.... \ominus *d** as in *jew*, (*-dʒhoo*).

Point Shut Voice... \ominus *d* as in *do*.

Lip Shut Voice..... \ominus *b* as in *boy*.

NASAL CONSONANTS.

While the organs are in the various Shut positions the passage through the nose may be opened. The

† The sound of *ch* in *chew*, commences with a shut position of the tongue, followed by the sound of *sh* (\square); and the shut position is assimilated to that of \square and becomes \square instead of \square .

* Top form to assimilate with *ʒh* (\square).

non-vocal Nasals have no sound but of the breath nasally emitted, and that is so feeble as to be scarcely audible. The non-vocal Nasals, therefore, have generally been denied inclusion as speech-elements. They are, however, common in English. Thus, when *m*, *n*, or *ng* precedes a non-vocal consonant in the same syllable, these nasals are voiceless, as in *imp*, *hint*, *inch*, *since*, *prince*, *glimpse*, *ink*, (= *ingh*), *length*. The effect is rather one of *hiatus* than of any audible quality; but it is peculiarly English. A foreigner may always be told by his vocalizing the nasals in such words:—

Back Shut Nasal ㄱ non-vocal *ng*.

Top Shut Nasal ㄴ non-vocal *n*.

Point Shut Nasal ㄹ non-vocal *n*.

Lip Shut Nasal ㅁ non-vocal *m*.

Back Shut Nasal Voice . . ㄱ *ng*.

Top Shut Nasal Voice . . ㄴ *n*.

Point Shut Nasal Voice . . ㄹ *n*.

Lip Shut Nasal Voice . . ㅁ *m*.

SYMBOLS OF VOCAL PHYSIOLOGY.

Before the publication of the system of Visible Speech, public demonstrations were given (in Edinburgh and London), of the unique power of the symbols to represent “any sound that the mouth can make.” Professors of nearly all the European languages, and of Sanscrit, Persian, Chinese, etc., as well as speakers of North American, African, and other tongues, dictated the most uncouth varieties of strange

phonetics, which were written in Visible Speech upon the black-board, and afterwards read, by a student of the system, with an effect which seemed "like an echo" of the original dictation. The reader, of course, was not present while the tests were dictated. These results have been repeated in this country, and may be repeated in any country.

To qualify the student for this application of Visible Speech, he must be familiar with the vowel and consonant symbols exhibited in the preceding pages, as well as with the following supplementary symbols of Vocal Physiology.

SUPPLEMENTARY SYMBOLS.

- Throat and Glottis wide. *H*.
- ⊖ Throat contracted. *Whisper*
- | Glottis straight and narrow. *Voice*.
- + Round Voice. (*Labialized*).
- ⊥ Nasal.
- ⋮ Trill of the organ represented in preceding symbol, thus: ⊖⋮ Throat Trill (of the epiglottis);
C⋮ Back Trill (of the uvula); ⊔⋮ Lip Trill.
- ⌘ Catch—of the Glottis, as in *coughing*,
- < Suction—drawing in air.
- > Breath—emitting breath.
- Stop—of the breath while the organs retain their position for preceding element.
- ◁ Suction stopped. An effort of suction without drawing in air; as in T ◁, an interjection of *vexation*.

- > Breath stopped. An effort of percussion without emission from the throat; as in P>, a smoker's puff.
- ‡ Holder. Prolongation of preceding sound or organic position.
- | Side.
- || Sides. The opening of one or both side apertures after a shut position.
- ‘ Abrupt.
- , Hiatus—between the elements of a syllable; as in *p'aper*. (Irish).
- ^ Close. A compressive formation of preceding element.
- v Open. A loose formation of preceding element.
- c Inversion of the tongue.
- o Protrusion of the tongue.
- Link — joining two elements simultaneously formed.
- ◊ Whistle.
- ◊ Vocalized whistle.
- ◊ Lingual or inner whistle.
- Level tone.
- / Simple rise.
- \ Simple Fall.
- v Compound rise.
- ^ Compound fall.
- ^/ Rising wave.
- [Higher than preceding pitch.
-] Lower than preceding pitch.
- ‘ Accent (stress), written high, as in *a'way*.
- , Emphasis, written low, as in “The ,one thing needful.”

EXEMPLIFICATION OF ENGLISH VISIBLE SPEECH.

In the following pages, English Visible Speech is exemplified, by interlinear transliteration, to furnish a convenient form of exercise.

USES OF VISIBLE SPEECH.

Visible Speech is the ready vehicle for a universal
 අක්ෂරමය පටිපාටි ක්‍රමයක් මගින් සියලුම භාෂා සඳහා
 language. Whenever that necessity of mankind is
 ඇතිවන්නේ. එවිටම භාෂා භාවිතයේ දී භාෂාමය පටිපාටි ක්‍රමයක්
 provided, Visible Speech will be the equally
 සමානවත්, අක්ෂරමය පටිපාටි ක්‍රමයක් මගින් සියලුම
 necessary means for its diffusion. No language is
 භාවිතයේ තිබෙන භාෂා සියලුම සමානවත්. භාෂාමය පටිපාටි ක්‍රමයක්
 foreign to Visible Speech. It will teach German,
 ඉංග්‍රීසි මේ අක්ෂරමය පටිපාටි ක්‍රමයක්. මේ අක්ෂරමය පටිපාටි ක්‍රමයක්,
 French, English, or Zulu with equal ease, and
 ඉංග්‍රීසි, ඉංග්‍රීසි, දූ භාෂා අක්ෂරමය පටිපාටි ක්‍රමයක්, මෙය
 that either to foreign or to native learners. It
 භාෂා භාෂා මේ ඉංග්‍රීසි දූ මේ භාෂාමය පටිපාටි ක්‍රමයක්. මේ
 teaches the *eye* to discriminate sounds, enabling
 පටිපාටි ක්‍රමයක් මගින් භාෂා මේ ස්වරයන්හි පරිණාමය, ස්වරයන්
 those who have no "ears to hear" to use artic-
 භාෂා මේ පටිපාටි ක්‍රමයක් "ස්වරයන්හි පරිණාමය" මේ භාෂා
 ulate language in their intercourse with the hearing;
 ස්වරයන්හි පරිණාමය මේ භාෂා ස්වරයන්හි පරිණාමය අක්ෂරමය
 and qualifying those who lisp, or burr, stammer
 මේ භාෂාමය පටිපාටි ක්‍රමයක් භාෂා මේ භාෂා, දූ භාෂා, පටිපාටි

or stutter, to pronounce their words with correctness and fluency. It will do away with dialectic peculiarities so that these may no longer "bewray" the speaker's provincialism. It will enable children to learn their mother tongue with rapidity, and through that to learn any other tongue with a facility now unknown. Visible Speech is the realization of a long-cherished dream of philosophers.

While it was only a dream, and considered hopeless of attainment, a universal alphabet was felt to be a grand linguistic desideratum. Now that it is an accomplished fact, are all as ready to accept it? But Visible Speech is more than a universal alphabet. It is also a self-interpreting alphabet of universal sounds.

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A. J. ELLIS'S ESTIMATE OF VISIBLE SPEECH.

Alexander John Ellis, the chief phonetician of the nineteenth century, has left on record his estimate of Visible Speech. After witnessing a demonstration, by means of tests of his own devising, Mr. Ellis wrote:—*

“The mode of procedure was as follows: Mr. Bell sent his two sons, who were to read the writing, out of the room,—it is interesting to know that the elder, who read all the words in this case, had only had five weeks’ instruction in the use of the alphabet—and I dictated slowly and distinctly the sounds which I wished to be written. These consisted of a few words in Latin, pronounced first as at Eton, then as

* Letter to *The Reader*, September 3, 1864.

in Italy, and then according to some theoretical notions
 of how the Latins might have uttered them. Then
 came some English provincialisms and affected pro-
 nunciations; the words “how odd” being given in
 several distinct ways. Suddenly German provincial-
 isms were introduced. Then discrimination of sounds
 often confused, from Polish, German, Dutch, Swiss,
 French and English. Some Arabic, some Cockney
 English, with an introduced Arabic guttural; some
 mispronounced Spanish, and a variety of shades of
 vowels and diphthongs. The result was perfectly
 satisfactory; that is, Mr. Bell wrote down my queer
 and purposely exaggerated pronunciations, and mis-
 pronunciations, and delicate distinctions, in such a

manner that his sons, not having heard them, so uttered them as to surprise me by the extremely correct echo of my own voice. Accent, tone, drawl, brevity, loudness, softness, were all reproduced with surprising accuracy. Being on the watch, I could, as it were, trace the alphabet in the lips of the readers. I think, then, that Mr. Bell is justified in the somewhat bold title which he has assumed for his mode of writing—'Visible Speech.' I only hope that, for the advantage of linguists, such an alphabet may be soon made accessible, and that, for the intercourse of nations, it may be adopted generally, at least for extra-European nations, as for the Chinese dialects, and the several extremely diverse Indian languages,

where such an alphabet would rapidly become a great social and political engine.”

පාලක ලෙස ප්‍රකාශනයක් ලෙස.

It was a confidence only due to Mr. Ellis's disinterestedness and promptitude in recognizing the merits of Visible Speech which led the author to invite that gentleman, at a later period, to inspect the theoretical details of the invention, before publication. In a second letter to *The Reader*, Mr. Ellis describes what he now knew theoretically as well as practically.†

මේ ආකාරයට මේ ලේඛන ප්‍රකාශනයට පෙර.

“In your number for September 3, 1864, you gave insertion to a letter which I addressed to you concerning Mr. Melville Bell's new system of expressing speech-sounds by written symbols. I had then been favored with a private demonstration of its capabilities,

† Letter to *The Reader*, August 5, 1865.

which I had tested to the best of my power; and
 බලන ආ ලෙස පැහැදිලිව පිටි පිටපතක් ලෙස දී ඇත; මෙය
 I was able to give a most satisfactory report to that
 ආ ප්‍රශ්න කොට පිටි වූ ආ පිටපත පැහැදිලිව පිටපතක් ලෙස දී ඇත
 extent. But I did not know the forms of the letters,
 ලෙස පැහැදිලිව. මෙය ආ වැඩ කරන ක්‍රමයක් වූයේ ආ වැඩ කරන ක්‍රමයක්
 or what each individual letter represented, or how
 ආ කරන ලද ක්‍රමයක් ලෙස පැහැදිලිව පිටපතක් ලෙස දී ඇත, ආ වැඩ
 they were to be combined, or what was the theory
 ක් ආ වැඩ පිටි වූ ප්‍රතිඵලය, ආ කරන ප්‍රතිඵලය ක් ක්‍රමයක්
 on which the extraordinary results I witnessed were
 මෙ බලන ක් ලෙස පැහැදිලිව පිටපතක් ලෙස දී ඇත ආ වැඩ කරන ක්
 based; and I was, therefore, obliged to qualify my
 පිටපත; මෙය ආ ප්‍රතිඵලය, ක්‍රමයක්, ප්‍රතිඵලයක් පිටපතක් ලෙස දී ඇත
 opinion. Mr. Melville Bell and his sons have now
 පිටපතක්. ආ වැඩ කරන පිටපතක් ලෙස පිටපතක් ලෙස දී ඇත
 been kind enough to devote several hours to explain-
 පිටපතක් ලෙස පිටපතක් ලෙස පිටපතක් ලෙස පිටපතක් ලෙස පිටපතක්
 ing to me thoroughly the whole phonetic theory and
 ලෙස පිටපතක් ක්‍රමයක් ක්‍රමයක් වූයේ ආ වැඩ කරන ක්
 plan of symbolization, and to read and exhibit on
 පිටපතක් ලෙස පිටපතක් ලෙස පිටපතක් ලෙස පිටපතක් ලෙස පිටපතක්
 paper before me examples of its use, sufficiently nu-
 පිටපතක් ලෙස පිටපතක් ලෙස පිටපතක් ලෙස පිටපතක් ලෙස පිටපතක්
 merous to enable me to form a complete judgment of
 පිටපතක් ලෙස පිටපතක් ලෙස පිටපතක් ලෙස පිටපතක් ලෙස පිටපතක්
 its powers and merits. I take the liberty, therefore,
 පිටපතක් ලෙස පිටපතක් ලෙස පිටපතක් ලෙස පිටපතක් ලෙස පිටපතක්

in the interest of science, to complete the information
 that I have you, so far as I am at liberty to do. I may add
 that I have no sort of connection, pecuniary or per-
 sonal, with Mr. Melville Bell's scheme; that I have
 not been of the slightest assistance to him in its con-
 struction; and that persons might even rather suspect
 me of wishing not to forward a scheme which will,
 I believe and hope, thoroughly supersede one on
 which I have labored for many years, and expended
 much money. My impressions in favor of Mr. Bell's
 scheme are so strong, that it is necessary for me to
 guard against any suspicion of being biased in giving
 them expression.

As I write I have a full and distinct recollection of

to me his careful, elaborate, yet simple and complete
 of the old system, however, the present system, I had no knowledge of alphabetic as a sci-
 system, I had no knowledge of alphabetic as a sci-
 ence. . . . Alphabetic as a science; so far as I
 know. . . . Alphabetic as a science, so far as I
 have been able to ascertain, and I have looked for it
 over the whole of the world, but it did not exist. . . . I should be
 very glad to say that Mr. Melville Bell's scientific system
 of alphabetic admits of no improvement. It would
 be strange if it did not. But it has all the present
 appearance, on the one hand, of satisfying the wants
 of science, and, on the other, of fulfilling the demands
 of practice. The power of showing by the very form
 of the symbol how to produce the sound is really as-
 tonishing, so perfect is the arrangement that a simple
 name is given to each vowel heard, depending en-
 tirely on the position of the tongue, and the position of the

tirely on the shape and modification of the wind passage, by which its power is conveyed with ease to those, who have been properly instructed in the meaning of the words employed. The numerous examples of the facility with which delicate distinctions in English pronunciation, and difficult Scotch and Irish dialectic sounds, could be symbolized and understood, were most interesting and satisfactory. No approach to such a perfection of analysis and symbolization of the vowels has yet fallen under my notice. Lastly came the consonants; and here, too, although they have been generally much better understood than the vowels, the treatment is very original, and apparently exhaustive.

I need only allude to the method of marking the position and shape of the tongue with respect to the palate, and the general modifications whereby the great variety of consonants thus formed is reduced to a rational and intelligent order. Nor must I omit to mention the mode of indicating glide sounds, during which the organs change their positions, and which, therefore, assume a kind of middle place between consonants and vowels.

ආශ්වාසයෙන් මෙම විස්තරය,

As it would be impossible to give illustrations, the above general remarks must suffice as an outline of the theory. To those who endeavor to pick up conceptions of speech-sounds from the confused accounts of ordinary writers, such a theory may seem terribly

lables of which the words consist. Mr. Bell considers that the forms of the letters would be easy for the blind to recognize by touch; but of this I am no judge. Their great peculiarity is that each letter has its genus immediately marked upon it, by its general contour, and its species by the detail of the contour; its varieties by diacritics of peculiar kinds . . . And thus the whole system is bound together by a philosophical and scientific chain.

It is a simple statement of fact to say that no system of marking our pronunciation which has hitherto been adopted has succeeded in marking the extent of national peculiarities of English speech, to the accuracy possible in Mr. Bell's system.

I am afraid my language may seem exaggerated,
 and yet I have endeavored to moderate my tone, and
 have purposely abstained from giving full expression
 to the high satisfaction and pleasure which I have
 derived from my insight into the theory and practice
 of Mr. Melville Bell's 'Visible Speech,' as it is
 rightly named.' "

ආයුර්වේදය.

No name is gilded with a brighter halo of unselfishness than that of ALEXANDER JOHN ELLIS, in "believing and hoping" that his own costly labour of years might be thoroughly superceded by the invention of Visible Speech! Honor to the great Phonetic Scientist, to whom jealousy was unknown!

